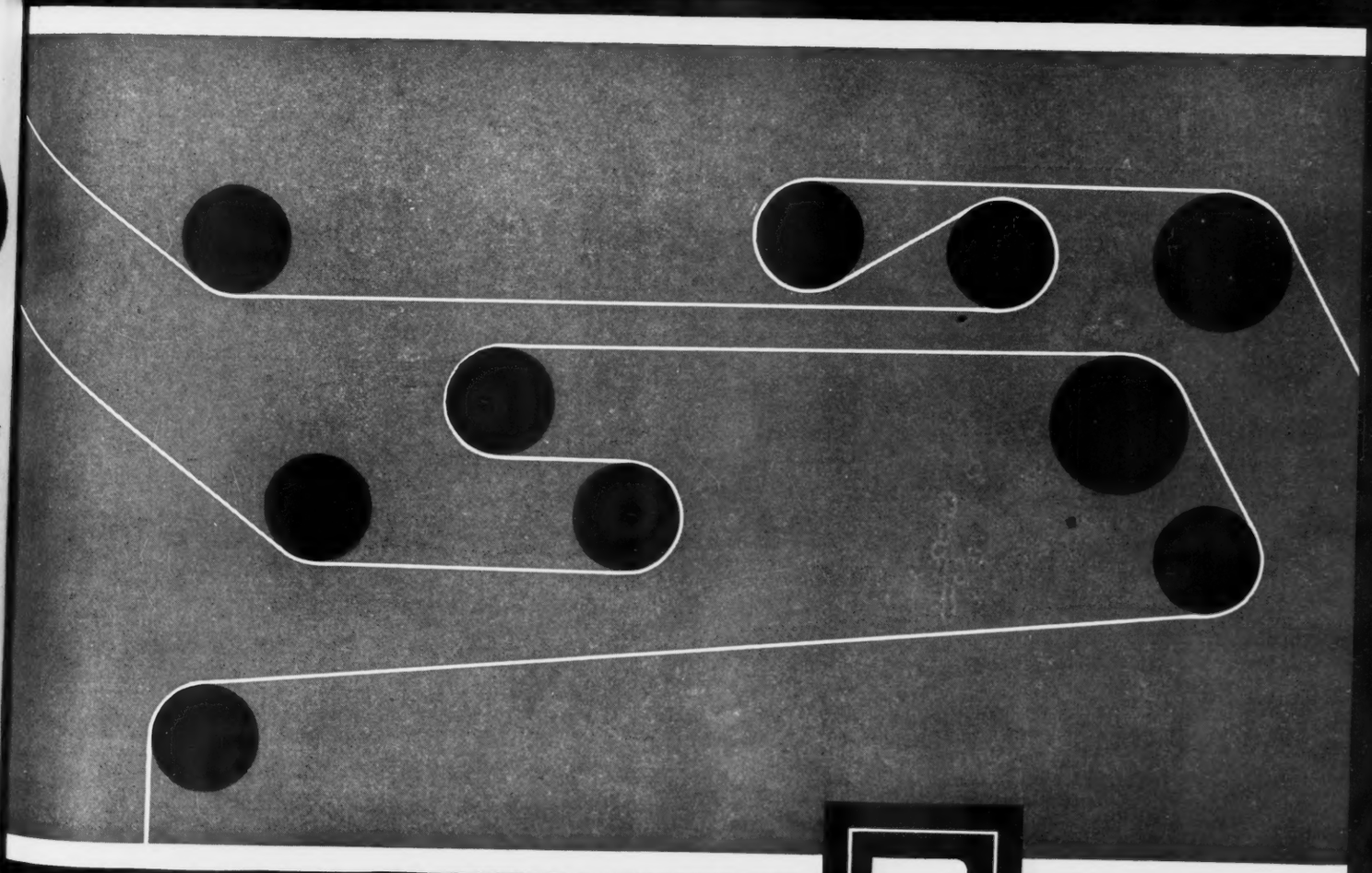
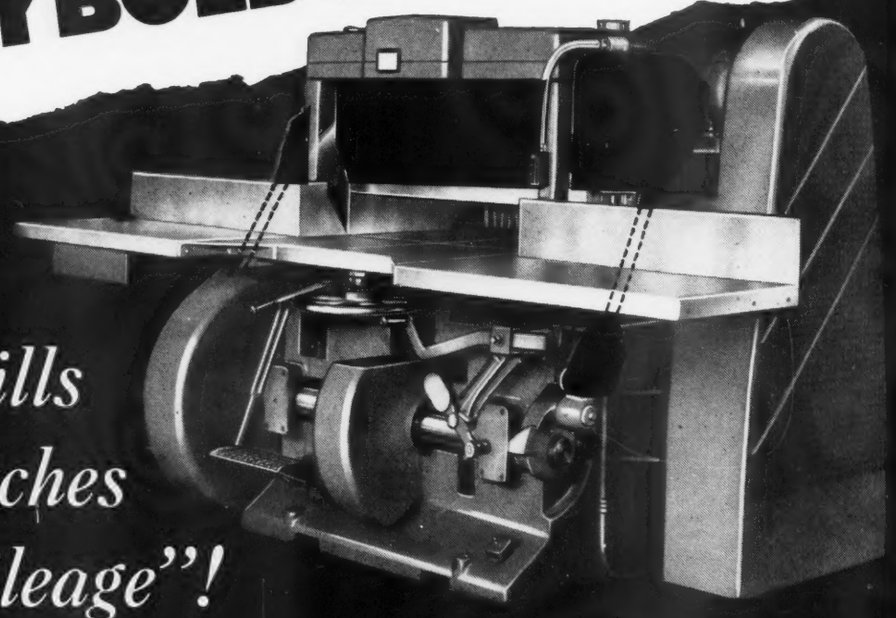
PRINTING EQUIPMENT



THE SEYBOLD HEAVY-DUTY 40"



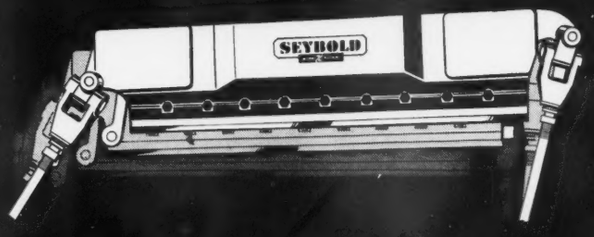
cuts service bills and stretches knife "mileage"!

Three years of on-the-job performance have proved Seybold's exclusive Z-Action. Z-Action was introduced in 1946 on the now-famous, Seybold "Sixty" paper cutters.

Z-Action is the Seybold method of putting the knife through the pile. Z-Action cuts at the correct angle... to overcome resistance and to reduce knife wear. Z-Action's double shearing motion eases the knife into the pile with minimum shock. Z-Action has sturdy, double-end pull to whisk the knife through the pile without chatter.

This scientific cutting action means less wear and tear on the cutter—fewer repairs, less down time. More than that, it saves your knives—gives them longer life, better cutting, more "miles" of cutting from each sharpening.

Z-Action has made Seybold "Sixty" cutters first choice of the industry. The Heavy-Duty 40" cutter features the same basic design—is the top-quality cutter in the small-size, low-price field. There are a few Heavy-Duty 40" cutters ready for immediate delivery.



because it has

Z-ACTION

Boston, New York, Philadelphia, Cleveland, Dayton, Atlanta, Dallas, St. Louis, Twin Cities, Chicago, Los Angeles, San Francisco, Toronto, Montreal, Vancouver.

MAKE ROUTING A PLEASURE . . .

Routing curved plates *can* be a monotonous, eye-straining, nerve-wracking job—but not when you are operating a new Sta-Hi MasteRouter!

This completely new and modern router is enclosed to protect the operator and his fellow workers from flying metal chips and dust.

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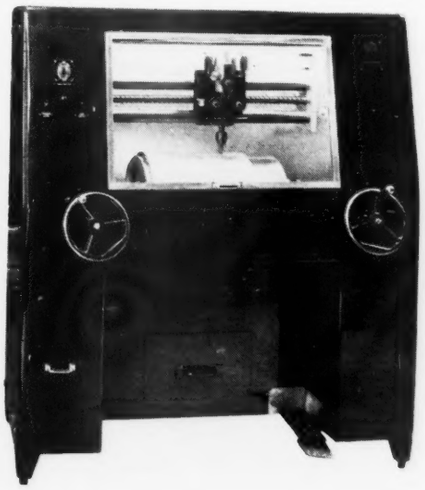
Yes, it's a pleasure to operate a Sta-Hi MasteRouter. . . We'll be glad to supply complete details at your request.

STA-HI



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BASIC MACHINES

used by Printers, Lithographers, Binders . . . for

FEEDING CHRISTENSEN CONTINUOUS STREAM FEEDER—For flat-bed, rotary and offset presses and varnishing machines where high speed is essential.

DEXTER CONTINUOUS RELOADING CARDBOARD FEEDER—Feeds cardboard up to 40 point thickness to any make flat-bed printing press, also to flat-bed cutting and creasing presses, in sheet sizes up to maximum capacity of press.

CHRISTENSEN PILE SUCTION STREAM FEEDER—For flat-bed, rotary and offset presses and varnishing machines.

DEXTER CONTINUOUS RELOADING SHEET METAL FEEDER—Feeding sheets 38 to 24 gauge, in standard sizes 14 x 18″ to 36 x 44″—at speeds of up to 80 per minute—and available also on special order to handle larger sheets, this Dexter Machine provides operation uninterrupted by stops for reloading.

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Pressmen Know

speed isn't everything

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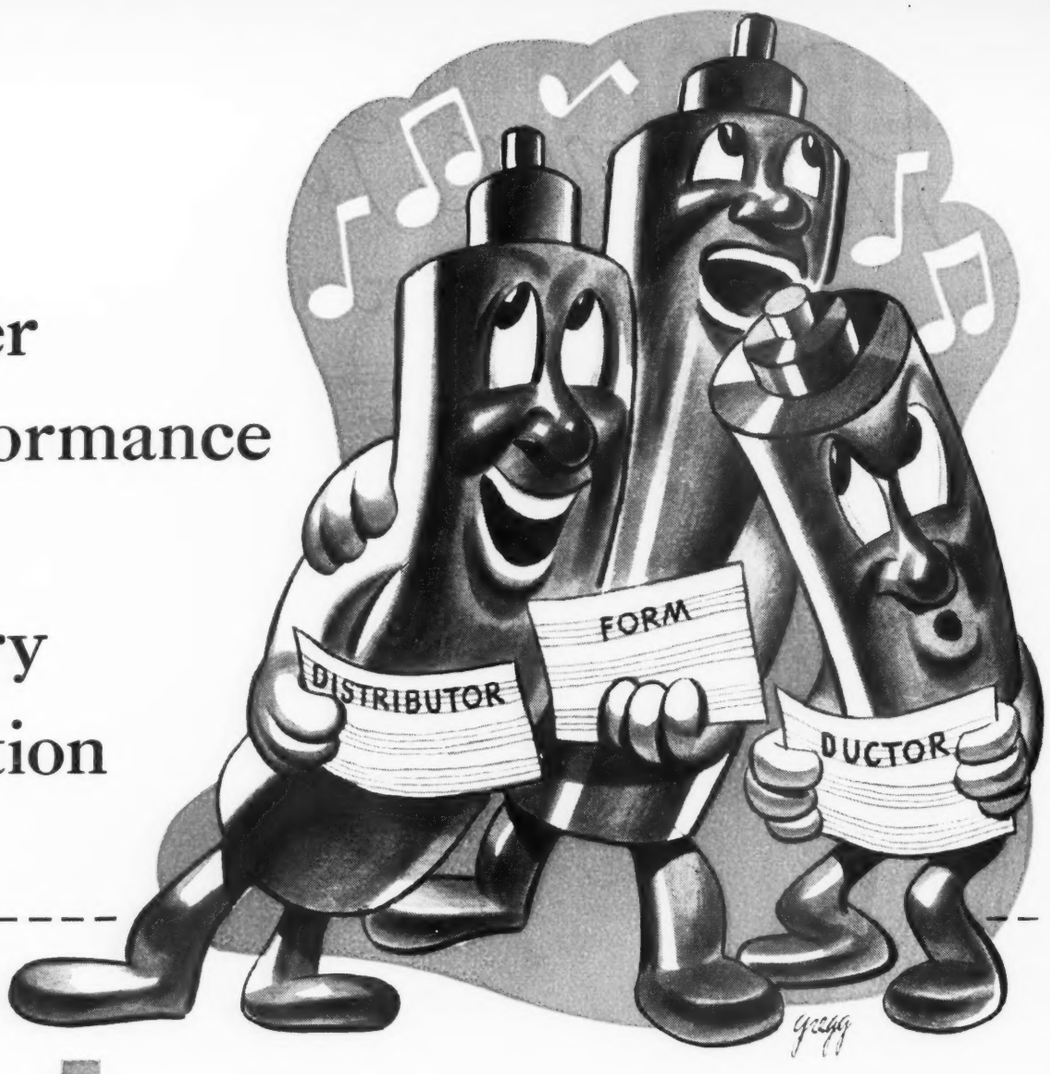
Miller presses have speed, if you want it. But more important, they have dependable mechanical design which assures the pressman time and ease of mind to produce beautiful, fine registered, high quality work.

Miller adjustments are simple; operating levers are within easy reach; and there is a feeling of dependability which permits the pressman to take time checking inks and using the "tricks of the trade".

miller

MILLER PRINTING MACHINERY CO. Pittsburgh 12, Pa.

For Super Performance in Every Position



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by **Dayton Rubber**

Pioneers of Improvements for Better Printing with lithographic, letterpress & newspaper Rollers; Color Separators and Fountain Dividers.

PRINTING EQUIPMENT *Engineer*

A TECHNICAL MAGAZINE

MAY
1949

Volume 78 Number 2

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

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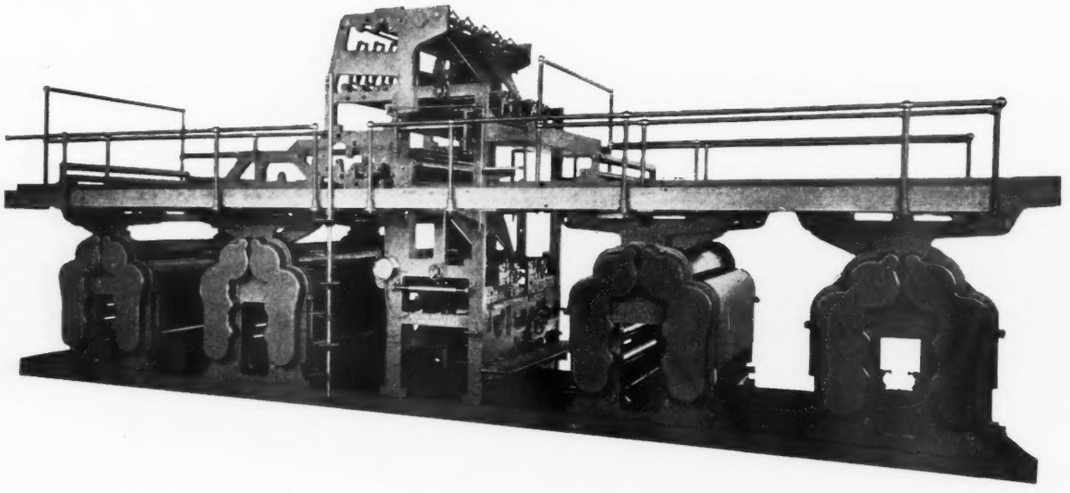

- The Scott is the ONLY newspaper press embodying important and modern engineering principles.
- Light weight, but extremely strong, hardened alloy steel spiral miter gears mounted tru'y concentric on splined high speed driving shafts carried in precision ball bearings, deliver a smooth and quiet flow of power to the press.
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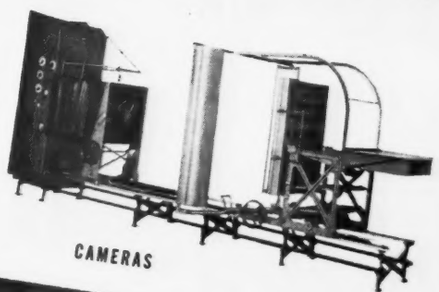

CAMERAS

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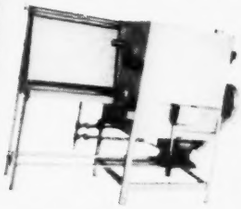
Chemco Stripping Tables provide an evenly lighted, non-glare surface that is easily adjusted to the most convenient working angle . . . Squaring-up device and adjustable-head stainless steel T square are standard equipment . . . Two drains provide ample capacity for carrying off excess water.

Chemco Cold Grid Printers speed production . . . Make for high fidelity in the plate image . . . Cut production costs . . . Are plugged into an ordinary 110-volt circuit without overloading.

Chemco leakproof developing tanks take plates up to 25" x 32" . . . Prevent rapid evaporation of the developing solution. . . . Stainless steel construction gives long service life.

COLD GRID PRINTERS

DEVELOPING TANKS



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Chemco burning-in ovens assure even burn-in . . . Are easy and economical to operate . . . Two types—gas heat or infra-red elements . . . Chemco stainless steel coolers, hooked in tandem with either type, are available for use with running water or for foot pump operation. Continuous power exhaust gives Chemco etching machines fume free operation in the etching room . . . Chemco takes either's plate sizes up to 25" x 32" . . . Chemco all stainless steel construction means long, trouble-free life.

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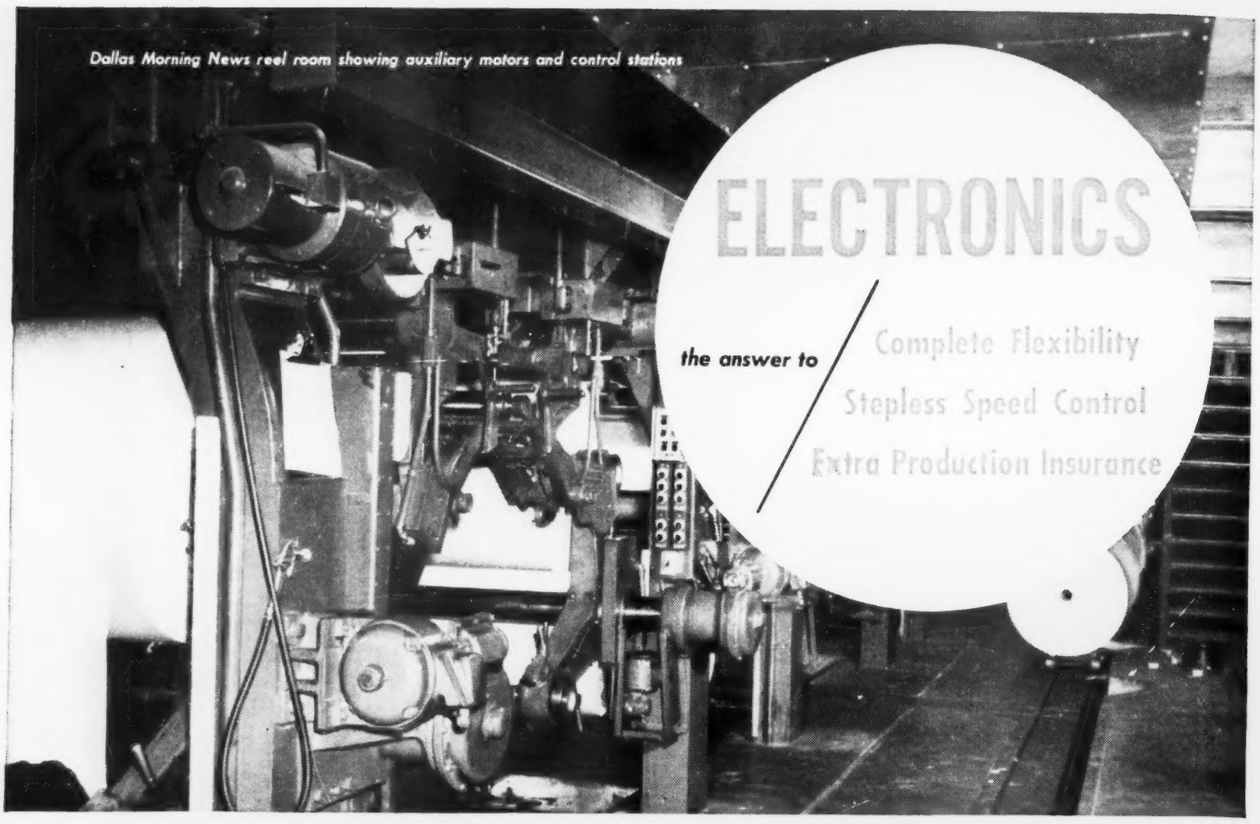

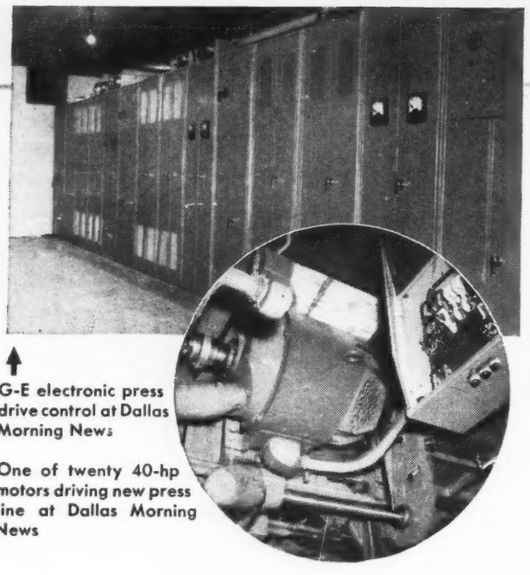

G-E electronic press drive control at Dallas Morning News

One of twenty 40-hp motors driving new press line at Dallas Morning News

Here's what another well-known newspaper production man—Leven Deputy, Mechanical Superintendent, The Dallas Morning News—says about the General Electric electronic press drive, installed for the first time in the Southwest by the Dallas Morning News:

"We believe in the idea of complete flexibility of press combinations, stepless speed control, and inherent standby capacity for extra production insurance. Because we believe electronic press drive can answer these expectations, when we planned our new printing plant, we ordered General Electric electronic press drive equipment."

The magic of electronics, successful in hundreds of other applications, has now proved itself a worthy partner in the printing industry. Through the ignitron rectifier tube, incoming a-c power is converted to d-c power for accurate and complete press control. Power costs are slashed. The entire installation is compact; easy to operate, easy to maintain. Get the details now!

YOU CAN PUT YOUR CONFIDENCE IN GENERAL ELECTRIC

General Electric can co-ordinate all your electric equipment—from glue pots to press drives—to fit your individual requirements. Why not take advantage of experienced G-E application engineering. Just outline your needs to a G-E Printing Specialist in our nearest sales office and let him help you with your printing problems.

General Electric Company, Section C 653-3
Apparatus Department, Schenectady 5, N. Y.

Please send me a copy of your bulletin GEA-4670 which describes the electronic press drives and control.

Name .....

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GENERAL ELECTRIC

MODERN NEWSPAPER PLANT

Demonstrates Versatility of GAS IN THE PRINTING ARTS

Business Manager David W. Mack, Tribune-Review Publishing Co., Greensburg, Pa.

Gas-fired casting pot and pig melter

Four of the six Linotype machines, equipped with Gas-fired pots

MODERN PUBLISHERS, who cope with rising costs by adopting streamlined production methods, depend on economical and efficient GAS for in-the-line heat processing. Throughout the graphic arts, GAS fulfills those essential tasks which assure profitable operation, whether in newspaper publishing, job printing, book binding or periodicals.

Typical example of all-'round GAS usage is the modern plant of the Tribune-Review Publishing Company, Greensburg, Pennsylvania. With morning and evening newspapers, this publisher demands real service from these modern Gas-fired units:

- Six Linotypes
- Two Ludlows
- One Elrod
- One Flat Caster
- One Pig Pot
- One Mat Scorcher
- One Stereotype Caster

Business Manager Dave W. Mack says, "We use GAS for all our heating operations because we've found it dependable, fast, and economical. Our maintenance and cleaning costs are kept at a minimum by the simple equipment and clean fuel."

For publishers with eyes on the headlines, and mechanical superintendents with hands in the production of those headlines, GAS is the ideal fuel for shop streamlining. Your local Gas Company will help you get the most out of your fuel by effective utilization in modern Gas Equipment.

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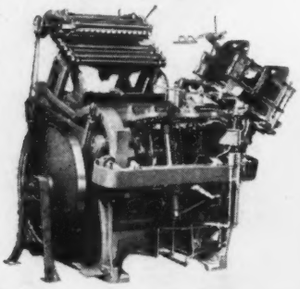
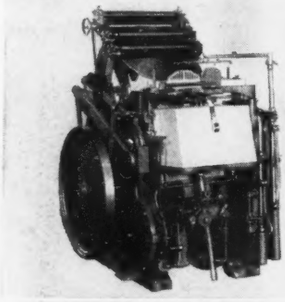
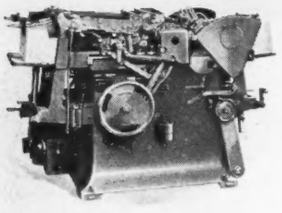
420 LEXINGTON AVENUE, NEW YORK 17, N.Y.

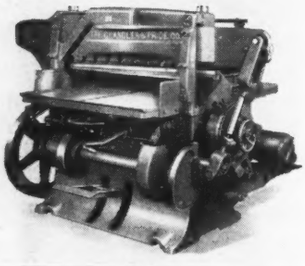
MORE AND MORE... THE TREND IS TO GAS FOR ALL INDUSTRIAL HEATING

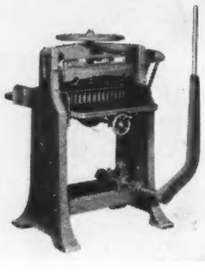
Protect Your Profits with Chandler & Price Equipment

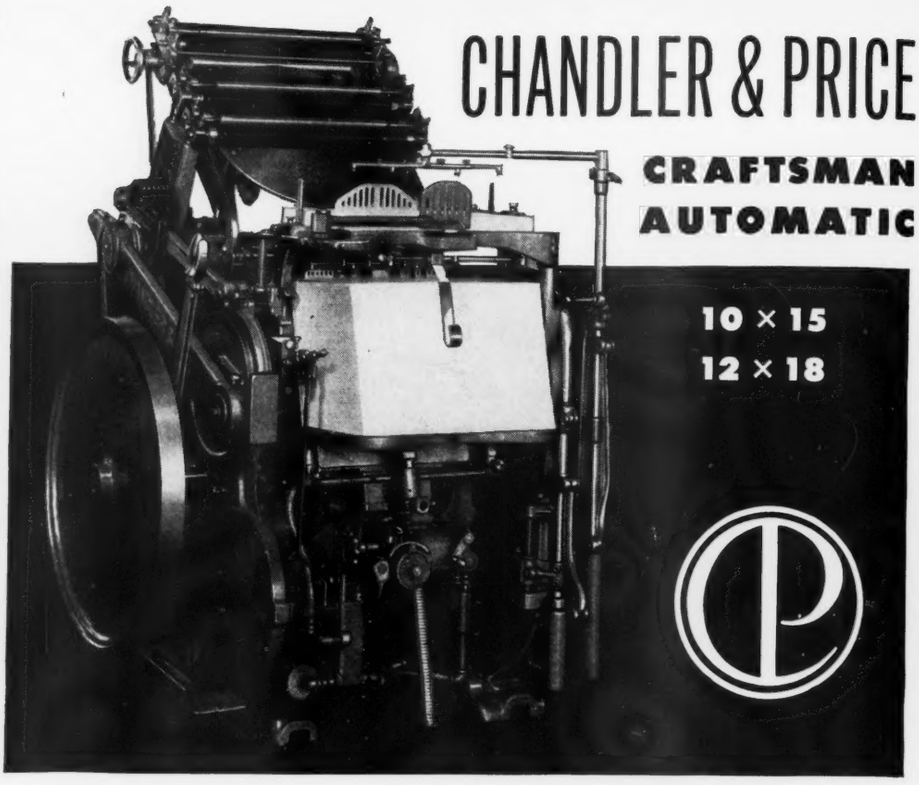












"The most profitable job press investment any printer can make"

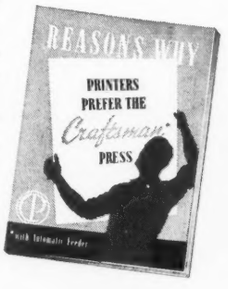
WITH the Chandler & Price Craftsman Automatic Press, impression adjustments are a simple matter of a few turns on a hand-wheel, cutting down makeready time from 20 to 40%. An exclusive C & P feature.

This is only one of many modern features that are the result of more than 60 years of C & P experience in building over 100,000 job printing presses—features that reduce idle press time. Craftsman Automatic units, designed to provide impressional strength for the higher speeds and the most exacting demands of present-day printing, have a one-piece, heavy, cast base that adds years to the life and accuracy of these presses by providing a solid foundation for all working parts.

Automatic features include: Automatic feeder that handles 14½" pile of stock, from onion skin to 12-ply cardboard, including irregular shapes such as folding paper boxes and cut-out novelties; automatic joggers both at back and sides of the delivery pile that help to cut down later rehandling of printed sheets; automatic throw-off of press if sheet fails to deliver.

Maximum operating speed of the 10 x 15" unit is 3500 impressions per hour; the 12 x 18" unit 3000 i.p.h., with daily production records on average work of 2000 to 2500 i.p.h. not at all uncommon.

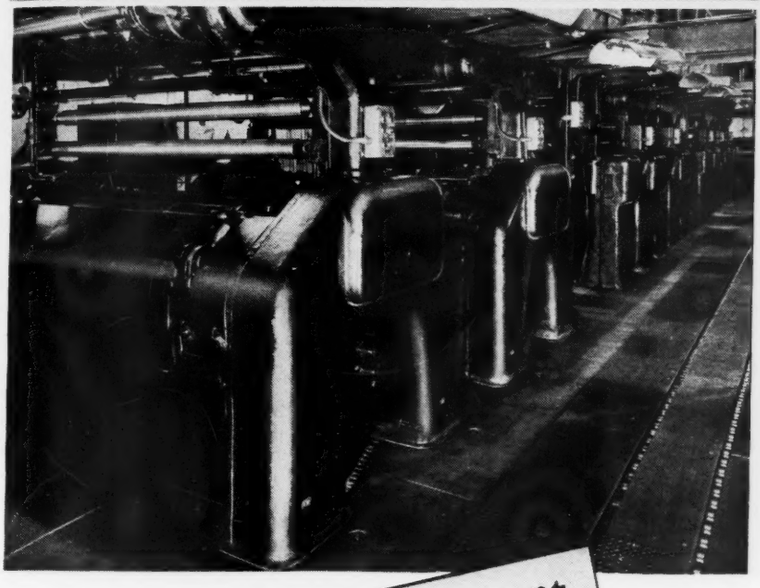
Write for catalog which explains why so many printers have said C & P Craftsman Automatic presses are the most profitable job press investment any printer can make.



THE CHANDLER & PRICE COMPANY
CLEVELAND, OHIO

MANUFACTURERS OF PRINTING MACHINERY FOR OVER 60 YEARS

The Oldest Newspaper Of Continuous Publication In America... The Hartford Courant Buys a New WOOD Press!



The Hartford (Connecticut) Courant is the oldest newspaper of continuous publication in America. It has been published, without a break since 1764 . . . it is also one of the most progressive American dailies. The Courant has just placed an order for a Wood press consisting of four newspaper units, a folder and four reels equipped with pneumatic tension... modern equipment capable of high speed, quality production for a forward looking newspaper.

We would appreciate an opportunity to discuss the advantages similar Wood equipment could bring to your plant.

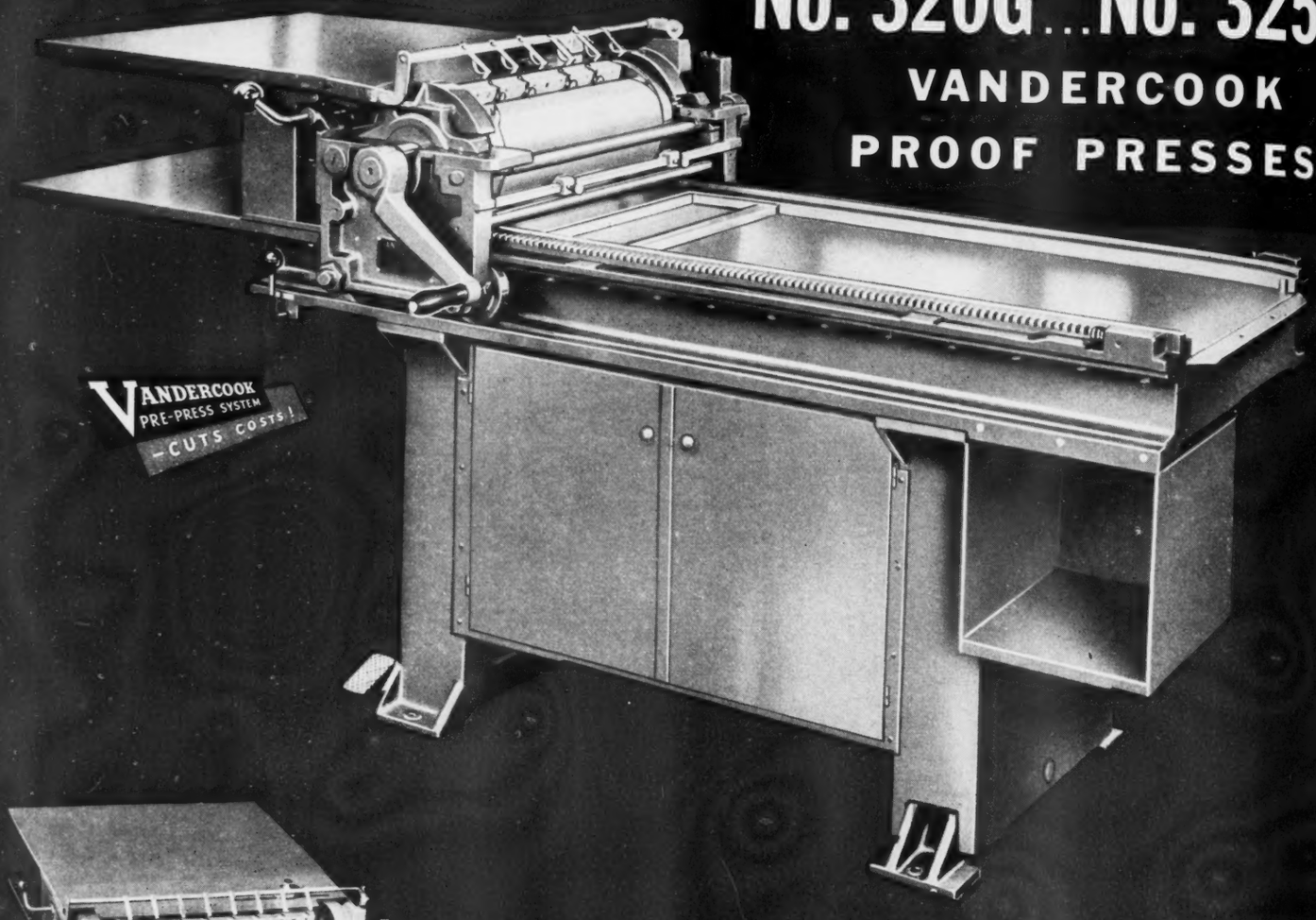
The Connecticut Courant.
MONDAY, October 29, 1764. (Number 00.)
HARTFORD: Printed by Thomas Green, at the Heart and Crown, near the North-Meeting-House.
1764
Red Cross Drive In Last Day With $14,000 To Go-Your Gift Needed Now
The Hartford Courant
Start Every Day Right
Administration Yields To Dixiecrats In Battle Over Filibuster Control
World-Wide News Events Told Briefly
Coal Industry Shut Down By Lewis Order
New Attempt Fails To Find Compromise
Frankels Get Custody Of Infant Girl
Parking Lot Hearing Set For April 4
1949

IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17

No. 320G...No. 325G
VANDERCOOK PROOF PRESSES



These two hand operated machines are ideal for printers, type setters and publishers where the volume of proofs is not sufficient to justify installation of faster power operated equipment. The two presses are identical in construction, general features and performance. They differ only in size—the No. 320G has 20 inches between bearers, while the No. 325G has 25 inches. Both will print forms up to 24½ inches long, and each will handle sheets up to 27 inches in length.

No. 325A...
FOR NEWSPAPER PLANTS

This model is practically the same as the No. 325G excepting that it is specially equipped for newspapers. It will prove a full newspaper page in type or high stereotype chase without printing the chase.

Ask your ATF salesman or write the nearest ATF branch for further information

American Type Founders 200 Elmora Avenue, Elizabeth 8, New Jersey

Branches in Principal Cities

Manufacturers of: Kelly Presses, Little Giant Presses, Chief Offset Presses, Web Offset Presses, Gravure Presses, Foundry Type and Process Cameras

Distributors of: Vandercook Proof Presses, Composing Room, Pressroom and Bindery Equipment

200 million pounds per year

That's MORRILL'S INK-MAKING CAPACITY

Back of every pound of MORRILL ink are those valued ingredients — quality and experience gained from years of research and manufacture. And all of this in behalf of pressmen, so they may have newspaper inks that are uniform in consistency and performance.

The sale of MORRILL ink is not considered complete until it is running satisfactorily on the press. Every MORRILL representative is a trained ink man.

MORRILL's ink-making capacity is your guarantee of a constant ink supply so that your production schedule may be maintained without interruption.

GEO. H. MORRILL CO.

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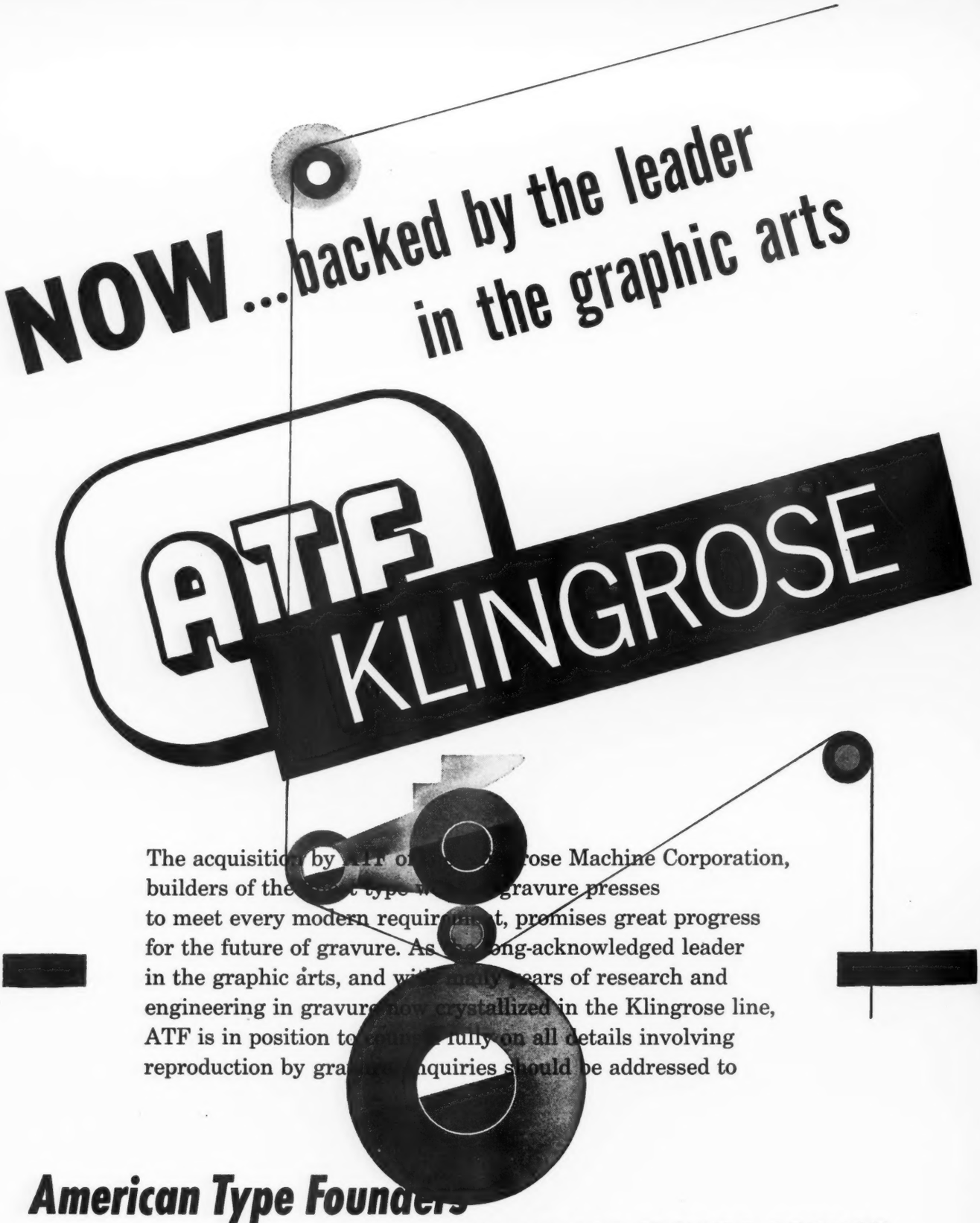

The acquisition by ATF of [illegible]rose Machine Corporation, builders of the [illegible] type [illegible] gravure presses to meet every modern requirement, promises great progress for the future of gravure. As the long-acknowledged leader in the graphic arts, and with many years of research and engineering in gravure now crystallized in the Klingrose line, ATF is in position to counsel fully on all details involving reproduction by gravure. Inquiries should be addressed to

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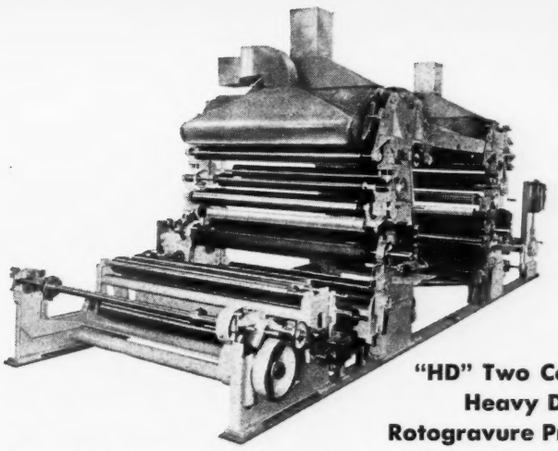
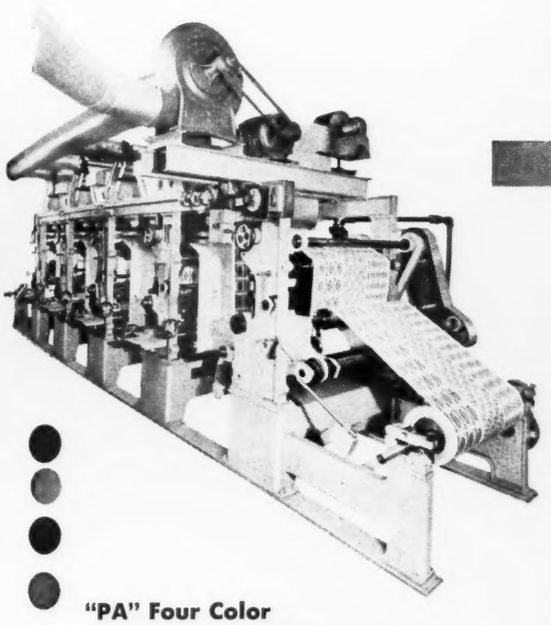


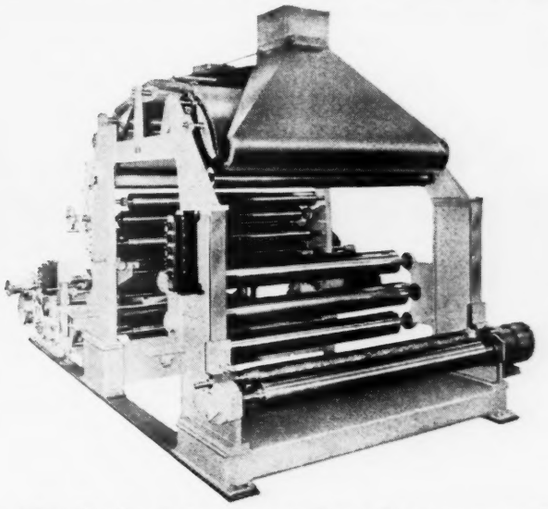
"HD" Two Color Heavy Duty Rotogravure Press

Built in web widths of 56″, 62″, and 72″. For printing two colors one side, or one color on each side of the web. Operating speeds up to 600 feet per minute on paper, tissue, film, laminated foil, and light-weight board. Can be equipped with a folder for magazine and newspaper work. The "HD" presses are used by paper converters for decorated papers, hosiery tissues and bags, cover papers, soap wraps, and other specialties. Photo shows operator's side and unwind roll stand.



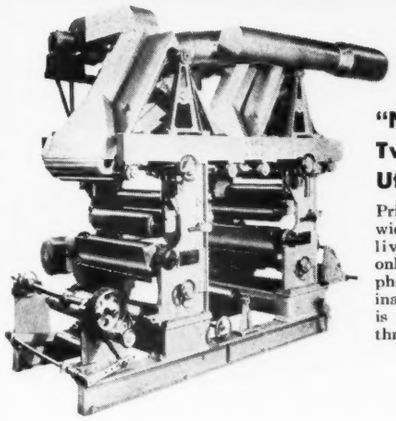
"PA" Four Color Multigravure Press

Built in web widths of 32″ and 42″. For printing on glassine, cellophane, film, laminated foils, and a wide range of papers. Will print four colors one side, two colors both sides, or three colors one side and one color other side. Operating speeds up to 450 feet per minute. Press comprises four printing units, pull roll with slitters, and center shaft rewind. Rotary sheeter or folder can be added. The "PA" presses are widely used for printing gift wraps, labels, box and candy wraps. Photo shows operator's side and rewind.



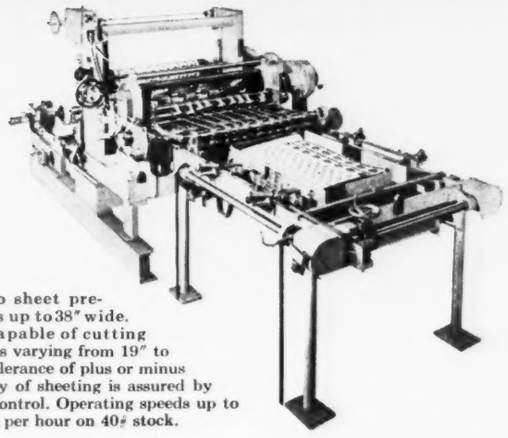
"HD" Single Color Heavy Duty Rotogravure Press

Built in web widths of 56″, 62″, and 72″. For printing on tissue, paper, and light-weight board. Operating speeds up to 1000 feet per minute. An excellent press for printing kraft and similar wrappings. Photo shows operator's side and electrically controlled surface rewind.



"NWP" Two Color Utility Press

Prints maximum web width of 24″ and delivers rewound roll only. Ideal for cellophane, paper, and laminated foil. This press is also available in a three color model.



Rotary Sheeter

Designed to sheet preprinted rolls up to 38″ wide. Sheeter is capable of cutting design lengths varying from 19″ to 46″ with a tolerance of plus or minus 1/64″. Accuracy of sheeting is assured by electric eye control. Operating speeds up to 10,000 sheets per hour on 40# stock.

THIS WILL DO IT—

- **Increase life of plates and blankets . . .**
- **Improve printing quality . . .**
- **Reduce web breaks . . .**
- **Step up net productive output . . .**
- **Promote safety for pressmen and press.**

Goss Tension Plate Lock-Up

• The Goss Headliner has it—the most advanced development in printing plate lock-up!

Plates are held in steady tension around the cylinder by a locking device which engages the underside of the plates. As a result, plates and cylinders become, in effect, a single element providing a constantly accurate printing periphery.

Tension Plate Lock-Up eliminates the problem of plates buckling across the cylinder . . . overcomes the tendency of centrifugal force to throw the plate off the cylinder . . . stops plates lifting on either side of the impression contact line and ends shifting on the cylinder.

Tension Plate Lock-Up is fast and sure . . . solves the problem of quality printing at high speed. For full details, ask the Goss representative who calls on you or write the main office.

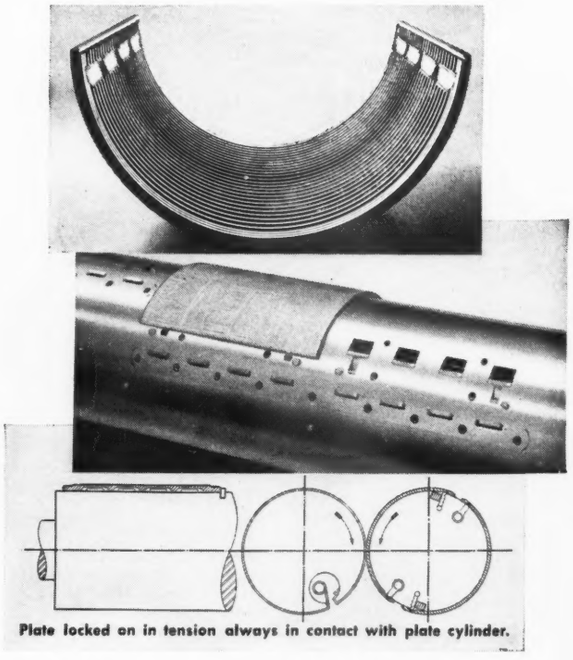


Plate locked on in tension always in contact with plate cylinder.

it's **GOSS** *again*

THE GOSS PRINTING PRESS CO., 1535 S. PAULINA ST., CHICAGO 8, ILL.

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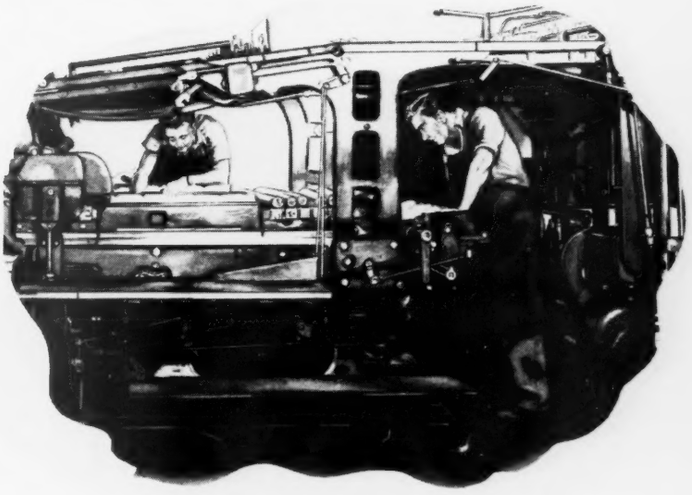
"IT'S GOT TO BE GOOD TO BE GOSS"

MIEHLE } *Best for* PRODUCTIO

Complete
ACCESSIBILITY
for . . .



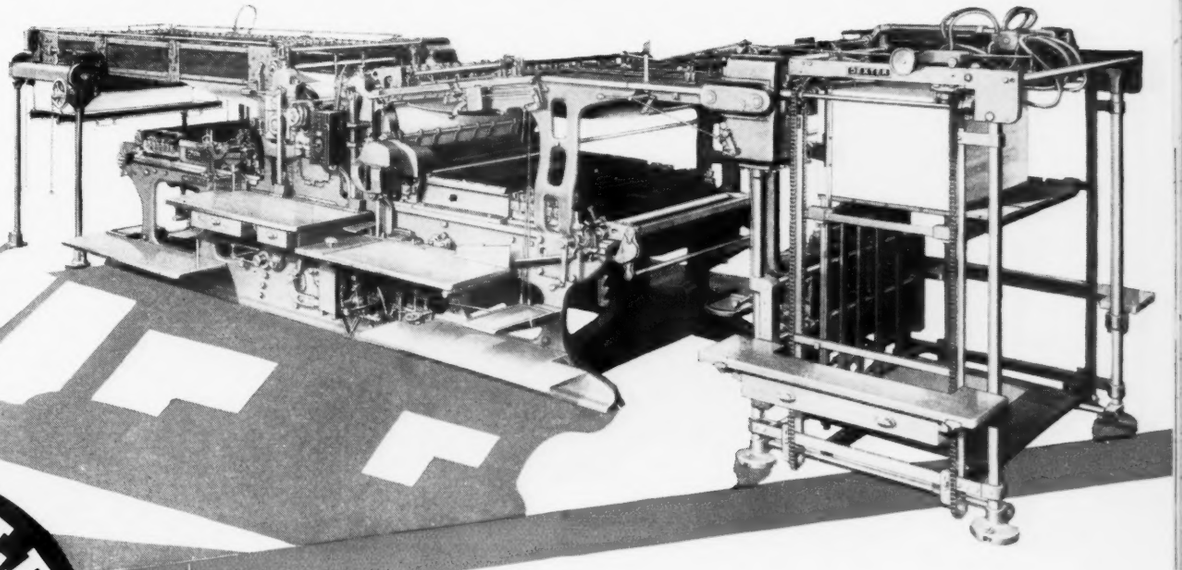
. . . MAKE-READY
Space to put on forms without moving feeder or delivery . . . counterbalanced front section of feedboard raises easily to give access to cylinder . . . fountain and bed are always accessible without need to "open up" the press.

. . . WASH-UPS
Time is saved in getting to fountain, ink plate and form. Rollers are quickly removed or may be washed up on the press.

. . . ACCESSIBILITY SAVES TIME
Short runs . . . long runs—make-ready and wash-up time is reduced to a minimum on new Miehle presses . . . more hours per day are *running* hours, *running* hours are *earning* hours.

BASIC SIZES

- *41 Single Color*
  Max. Sheet 28" x 41"
- *46 Single Color*
  Max. Sheet 33¼" x 45½"
- *41 Two Color*
  Max. Sheet 27¼" x 41"
- *46 Two Color*
  Max. Sheet 32" x 45½"



MIEHLE 41 LETTERPRESSES 46 SINGLE and TWO COLOR

Miehle Equipped Plants
are **PROFITABLE PLANTS..**

Miehle Printing Press and Manufacturing Co.
Chicago 8, Illinois, U.S.A.

USE MATRIX CONTRAST COLORS TO PREVENT *wrong font errors*

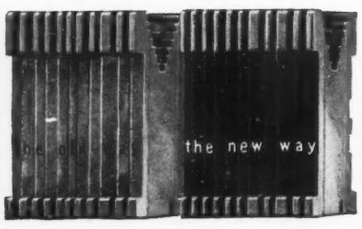
Uncle Mat says

With MATRIX CONTRAST SERVICE good operators stay on your payroll longer... less labor turnover!

More than 450 plants in all sections of the country are using Matrix Contrast Colors to aid operators in the detection of wrong fonts and to insure the positive selection of matrices from "pi" stackers or trays. As with Black and White Contrast, colors such as red, green, yellow or orange can be applied to old as well as new matrices... against the same jet black background.

With these new Matrix Contrast Colors, wrong font errors are plainly visible in the assembling elevator so that they can be detected and corrected before the line is cast. This quick, positive detection of a wrong font before it has been used in a single line also eliminates many reoccurrences of the original font error.

Write to our nearest office today for the complete story on the use of Matrix Contrast Service.



Empire State Building, New York 1, N. Y. — 326 W. Madison Street, Chicago 6, Ill. — 1105 Trenton Street, Los Angeles 15, Calif. — Sole licensees of the Percy L. Hill Matrix Contrast Patent No. 1,796,023, other patent pending. European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E. C. 1.

Matrix Contrast Service

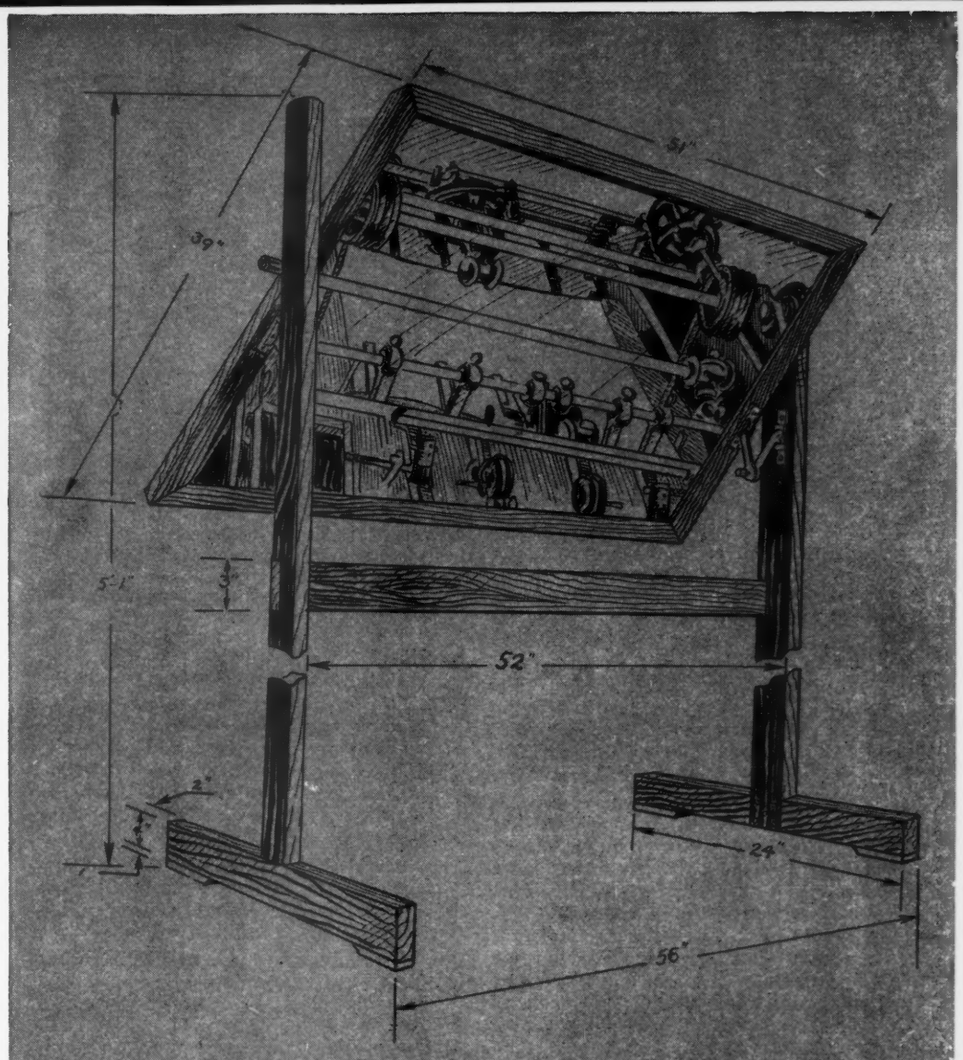


Fig. 1.—This drawing is illustrative of a Rear View Vision Mirror set up over pressman's bench opposite the delivery end of a 17 in. by 22 in. offset press. Reflected in the mirror is the feeder. While the pressman is working at his bench (see Fig. 2) he can occasionally glance at the mirror and obtain a view of press operation. The mirror is adjustable to any angle for complete visibility of either end of the press. It is understood, of course, that the wood frame will be constructed according to the press model.

"A guy has to have eyes in back of his head in order to hold down this job."

Rear View Vision

By GEORGE JOSEPH LENZER

THIS gripe of many a good pressman is often heard when a mishap occurs on the press. He may be engaged in the performance of some one of his many diversified duties such as mixing additional ink, checking impressions, preparing fountain solution, stacking finished work or jogging raw stock for the feeder pile, etc.

In effect, while the press is running its mechanical and automatic operation must be under almost constant observation, the pressman must watch the feeder pile and feeder mechanism, correct sheet flow and timing, the dampening rollers and system, the ink fountain and distributor system, sheet grippers and delivery pile.

A 10c tension spring may snap, or a machine bolt may shear off, the worn edge of a ratchet dog may no longer engage the wheel teeth, and constant vibration may cause some other part to loosen and slip.

It is that split second, when some minor or major mishap occurs while the press is running unattended, that results in frayed tempers, unjust accusations and always increased production costs through press breakdown stoppages.

No wonder then, that when something does go wrong while the pressman is performing another essential duty, he begins to grouch about his job, finally giving out with the plaint, "a guy has to have eyes in back of his head."

Supervising executives should pay serious attention to plaints like these. They are entirely justifiable. Furthermore, the average journeyman cannot be expected to devise work simplification means. If he did have that ability probably he wouldn't be holding a journeyman's job. It is the journeyman's duty to produce—and if given the proper facilities, he'll do just that. When the supervising executive hears such complaints he should set to work immediately to eliminate the cause or causes. He should be thankful also that the journeyman is conscious of the need for something to facilitate his work.

Putting eyes in the back of a pressman's head, for instance, is yet a physical impossibility. But the effect can be simu-

Fig. 2.—Side elevation of printing press and reflecting mirrors which permit pressman, while working at his bench or table during a run, to see whether or not the press is functioning normally. The angles of reflection are clearly indicated by the dash lines. In some cases, press observation is practical at a distance of 50 ft., in which case the lighting must be good with no obstructions in the line of vision.

lated at no great expense by the use of mirrors.

While driving a car, traffic on the road behind can be watched through the reflected image in the rear view mirror.

A bus driver, whose job is more difficult, not only watches the road ahead and behind, but also on either side of the vehicle, while at the same time keeping alerted to the safety and convenience of the passengers. And he does these things without going through a series of calisthenics, simply by using rear view vision provided by the judicious placement of rear view mirrors.

Recently, in a newly expanded lithographing plant, operating four 17 in. by 22 in. presses at full capacity to maintain close schedule production, the installation of rear view mirrors at each unit has proved to be a worthwhile investment. These provide each operator with facilities enabling him to give his press almost continuous visual attention.

An occasional glance into the mirror gives him a reflected image of his press in operation. Every mechanical operation and motion is clearly shown, within a radius distance of 50 ft. and within a visual angle of 30 deg. to 60 deg. from the center of the press.

Several variations of installation are possible, depending upon the existing conditions of space, work areas and locations. But regardless of conditions, the principle remains the same and can be utilized to full advantage anywhere.

The installations here referred to cost approx. $25 for each press. Two wooden standards and end posts were erected and bolted to the top of the pressman's work bench. A tie brace fastened into the mortised end posts completed the rigid supports.

The mirrors, 36 in. by 48 in. plate glass rejects, were obtained from a glass company for $10 each.

Smaller reject mirrors, about 18 in. by 24 in., were obtained at costs ranging from $2.50 to $5 each.

Salvaged crating lumber was used to hold the cost of erection to a minimum.

Depending upon the facilities of the plant, practically all of the construction material can be of salvage nature, reducing the material costs to the purchase of the mirrors only, assuming that the press is adequately illuminated. Providing the proper illumination will increase the costs a trifle.

Each of the presses discussed in this article is illuminated with 48 in. twin tube fluorescent lights in horizontally suspended overhead fixtures.

The following listed material is sufficient to erect a sturdy and economical rear view mirror assembly for any 17 in. by 22 in. press:

End Posts and Standards
(Wood)

2 pieces 2 in. by 4 in. by 5 ft. long for the end posts (mortised).
2 pieces 2 in. by 4 in. by 2 ft. long for the standards (mortised).
4 pieces 1 in. by 2 in. by 4 in. long for the standard feet.
1 piece 1 in. by 3 in. by 56 in. long for the tie brace.
4 carriage bolts of suitable length, to anchor the standards to the work bench.

Mirror Assembly

1 plate glass mirror (reject or slightly defective) 36 in. by 48 in.
1 frame (wooden) 39 in. by 51 in. mitered and mortised as follows:
  2 pieces 1 in. by 2 in. by 39 in., outside dimensions.
  2 pieces 1 in. by 2 in. by 51 in., outside dimensions.
and
1 small plate glass mirror 18 in. by 24 in.
1 frame (wooden) 22 in. by 28 in. outside dimension.
1 rigidly suspended mirror support fitted with an adjustable locking device.

Hinge for Large Mirror

1 length of ½ in. galvanized pipe.
4 galvanized pipe straps.

Angle Adjustment

1 pair storm sash adjustment braces.

Assembled with mortised joints, fastened together with a sufficient number of nails and screws, given a coat of paint, the job is complete.

The Trial Period

When first installed, the idea of mirrors was greeted with derisive and scurrilous remarks, especially from the pressmen who felt that the innovation was a reflection on them and their workmanship. They viewed the setup with suspicion, feeling that they were being subjected to an elaborate spy system. These and many other fearful thoughts entered their minds, because they had not been previously informed of the new installation or of its function.

Curiosity soon overcame their resentment, and their first glances at the mirrors were soon replaced by bolder and more frequent studies of the reflections. They became more familiar with the setup and its function and their confidence was restored.

Each pressman now performs his duties with greater ease. He takes more pride in his press, its cleanliness and performance.

Subconsciously, he feels that his press is now his responsibility alone. He has more freedom of action, less fear of rebuke, his surroundings are brighter and the drabness of his job has been glamorized.

DRYING RACK MADE OF COOKIE DISPLAY—A cookie display rack such as is found in most grocery stores has been turned into a drying rack by W. W. Hoffman, foreman of the McAlester (Okla.) Pub. Co. All that was needed to convert the cookie display rack into a drying rack was to cut pieces of stout cardboard the proper size to fit on the several shelves of the cookie rack. That gave a solid surface on which to lay the freshly printed stock.

Blueprint

of Printing Machinery Industry in War

By PETER B. B. ANDREWS*

**Former Industrial Economic Advisor Printing & Publishing Division War Production Board*

I.

NOT much more than three years ago I had finished six months of laborious writing and editing of the analytical history of the Printing & Publishing Division of the War Production Board, which regulated the vast printing, publishing, and printing machinery manufacturing enterprises of the nation.

This 470-page official tome gave, and analyzed in detail, our actions and reasons therefor, the results, and the mistakes we had made.

It was, in effect, a great blueprint ready to be drawn out and used instantly as a pattern for an emergency program. After the hard-hitting "Cap" Krug had read it and given it a much appreciated commendation, I had breathed several sighs of relief and went back to work as a private citizen. "That volume," I thought, "is going to gather a lot of dust before it's ever looked at again."

Informal Conferences

But in the past several months no dust has been allowed to gather on it; there have been four informal conferences on a standby program for the great printing machinery industry. The program is ready, and an emergency (but only an emergency) would bring rapid effectuation of it.

The printing machinery manufacturing industry was one of the first industries to convert to production of war goods in the last war, being at one time almost wholly converted thereto and having an outstanding record for extent and efficiency of effort.

Printing Equipment Industry

Here is the way the Government has the printing equipment industry tabbed. The printing machinery industry comprises about 130 manufacturers, who confine their efforts normally to making machines and equipment for the printing and publishing trade. Most of the plants are moderate in size, employing around fifty to two hundred workmen. Only about five employ over 1,000 workmen.

Most of the equipment in these plants is general, all-purpose machine tools. The character of the output of these plants may properly be classified as precision production, working to close tolerances. The printing machinery industry employs about 18,000 workers and it now has an annual output of $200,000,000. It supplies all the working tools for the printing and publishing industry of the United States as well as about 10% to 15% of its output for export to Canada, British Commonwealth and Latin America.

Printing Industry

It is significant that the whole printing and publishing industry employing 400,000 people and having an annual product worth $3,165,000,000, depends on such a relatively small machinery industry, being certainly a tribute to the production genius of this industry.

Normally, a large part of the printing machinery is sold for replacement of older equipment. At ordinary rates of production of new machinery, it would take 20 years to replace all the existing plant machinery now in use in the printing and publishing industry. This fact, plus a modernization trend, with buyers particularly eager for color presses, accounts for the excellent current situation and outlook of the printing equipment manufacturing industry.

The blueprint shows that jurisdiction, or who was going to regulate the printing machinery industry, became an early problem in the history of printing machinery, after war broke out.

Originally, in the autumn of 1941, printing machinery was handled by the Office and Industrial Machinery Branch of OPM. It was grouped with Paper Mill Machinery in one section of that branch. Because of the magnitude of all the industries in that one branch, the branch was subdivided early in 1942 into three: Service Equipment Branch, General Industrial Equipment Branch, and Special Industrial Machinery Branch.

The last-mentioned branch included under its jurisdiction those kinds of equipment designated as special by the Bureau of the Census of Manufacturers, such as textile machinery, food processing machinery, wood-working machinery, etc. Paper, pulp and printing machinery constituted one section of this branch. Later in the year—on July 15, 1942—the Special Industrial Machinery Branch was dissolved by an administrative order and the work of the branch assigned to

Disposal of Fluorescent Lamp Tubes

(From Safety Reprint No. 9 distributed by the National Safety Council.)

THE disposal of burned out fluorescent lamp tubes may introduce a health hazard. Such hazards include the dust of beryllium compounds with which the tubes are coated may be inhaled; cuts or scratches from the broken tubes may retain some of the beryllium compounds; and mercury vapor may be inhaled.

The best method of disposal where many tubes (hundreds a day) are replaced is that used by tube manufacturers themselves. From a floor above, through a slot, the tubes are dropped into an enclosed and ventilated crusher. Broken glass is removed wet. Exhaust goes through a collector and captured dust is wet down and removed.

Smaller users of lamps can place the tubes in a weighted burlap bag, immersed in water in a trough or shallow tank, where they can be broken with a crowbar or length of pipe. The wet bag, unopened, is then removed and dumped.

In the open air where phosphor dust and mercury vapor will be quickly dispersed by air currents, the tubes may be broken individually in their cardboard jackets by a crowbar or length of pipe. The operator should stand to windward and wear goggles and heavy canvas or leather gauntlets.

Disposal in incinerators is not recommended.

Although the tubes are under vacuum and implode when broken, once in a while one will explode. In any method of dry breaking or in handling wet broken glass, heavy gauntlets and goggles should be worn.

It is important that cuts from the coated glass be seen at once by a physician. Experience has shown that even a small amount of the powder remaining in a minor wound may delay healing and cause excessive growth in the scar.

other WPB branches. Printing & Publishing Machinery was transferred to the Printing & Publishing Branch of the War Production Board.

All this inefficient bouncing around of the printing equipment industry most certainly will be avoided in the next emergency, and it will appear at once as a vital section of the Printing & Publishing Division, where much more efficient administration can be achieved.

Policy Jurisdiction

It must not be supposed, however, that the original transfer of the printing equipment industry to the Printing & Publishing Branch of the WPB was simply a matter of "more efficient administration." The matter of *jurisdiction* was linked tightly with *policy*. And while everyone in WPB was agreed on major policies of conservation of critical materials and on all possible conversion to war work, there were sharp differences of policy about what we conceived to be the best interests of printers as opposed to the best interests of the machinery builders.

The very question of survival of businesses was at stake. And some bitter name-calling took place. As I discuss the various steps taken to regulate the industry and thus making the blueprint for future regulation, I will show the different policy points of view.

The earliest work of the Pulp, Paper and Printing Machinery Section in the autumn of 1941 and in early 1942 was preparatory. For one thing, it consisted of staffing the Section. The organization chart provided for a Section Chief, Deputy, Economist, two statisticians and a few industrial specialists as well as stenographic and clerical help.

At that time, in 1941, there seems to have been an abhorrence (which we finally broke down) of entrusting the direction of the Sections to people directly from the industry. The theory was that the industry people could not act disinterestedly. By early 1942, however, under the urgent necessity of having practical people and not starry-eyed remakers of the world, personnel were being recruited who had intimate knowledge of these industries.

Other preparatory work included complete lists of manufacturers whose products belonged in the jurisdiction of the Section, assembling complete catalog files, and training the personnel of the Section in priority regulations. As early as November 1941 we were receiving PD1A applications for machinery and for materials to be used in making machinery. Ratings assigned at that time ranged from A-2 down through A-10 to B-2. They were mostly the un-urgent A-10. The determination of whether to grant or deny applications for machinery depended on whether or not the machines were all built, or partly built with the materials to complete them in the manufacturers' stock.

Old L-83

The first limitation order issued by the Special Industrial Machinery Branch was L-83, dated April 9, 1942. This order covered most kinds of machinery handled in the branch at that time, which besides printing equipment included papermaking and other kinds of machinery. The order prohibited further production and delivery of new or used equipment except that valued under $200, or except to fill approved orders, i.e., Army, Navy, Lend Lease and civilian orders bearing preference ratings A-9 or higher issued on PD1A or equivalent certificates.

All other orders then on manufacturers' books were frozen. In order to seek release of these orders, manufacturers were instructed to submit lists of these orders to the branch, showing the degree of completion of the orders. If the WPB considered it to be in the public interest, it then proceeded to authorize the completion of these unrated orders.

It didn't take long for the Special Industrial Machinery Branch to learn that the original L-83 had many imperfections. It was much too drastic in so completely forbidding production. The time was April, 1942. Many manufacturers had only recently taken war contracts for combat material. They were still tooling up.

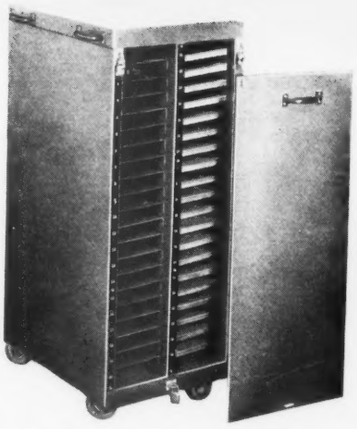
These manufacturers pleaded that for the WPB to forbid manufacturing their normal peacetime products would necessitate their laying off many workers who would be needed later in the year on war contracts. They claimed that L-83, instead of helping them to clear their plants for war-work, would freeze a lot of materials partly fabricated at financial loss to the manufacturers.

(To Be Continued)

Galley Transfer Truck

THE Foster Mfg. Corp. has introduced a Galley Transfer Truck to facilitate the moving and transfer of loaded galleys. While in motion the sloping shelves absorb most of the shock.

Four handles provide a means for guiding the truck up and down small ramps, through galley storage area, or over rough floors. A heavy steel door is provided to prevent galleys from sliding out while truck is in motion or being ex-



pressed from one city to another. Hard rubber, ball bearing wheels are provided. Two of the wheels are swiveled. Manufactured of prime gauge steel.

Full particulars may be obtained from *Printing Equipment Engineer*.

Linotype Gothic

FOUR new sizes of Gothic 17 with 19 which have been cut by Mergenthaler Linotype Co. are 12, 14, 18 and 24 point. Gothic 17, designed for classified display composition, will soon be available in a range of sizes from 6 pt. to 36 pt. The following examples are illustrative of the four sizes recently cut:

24 Point Linotype Gothic 19 with 17

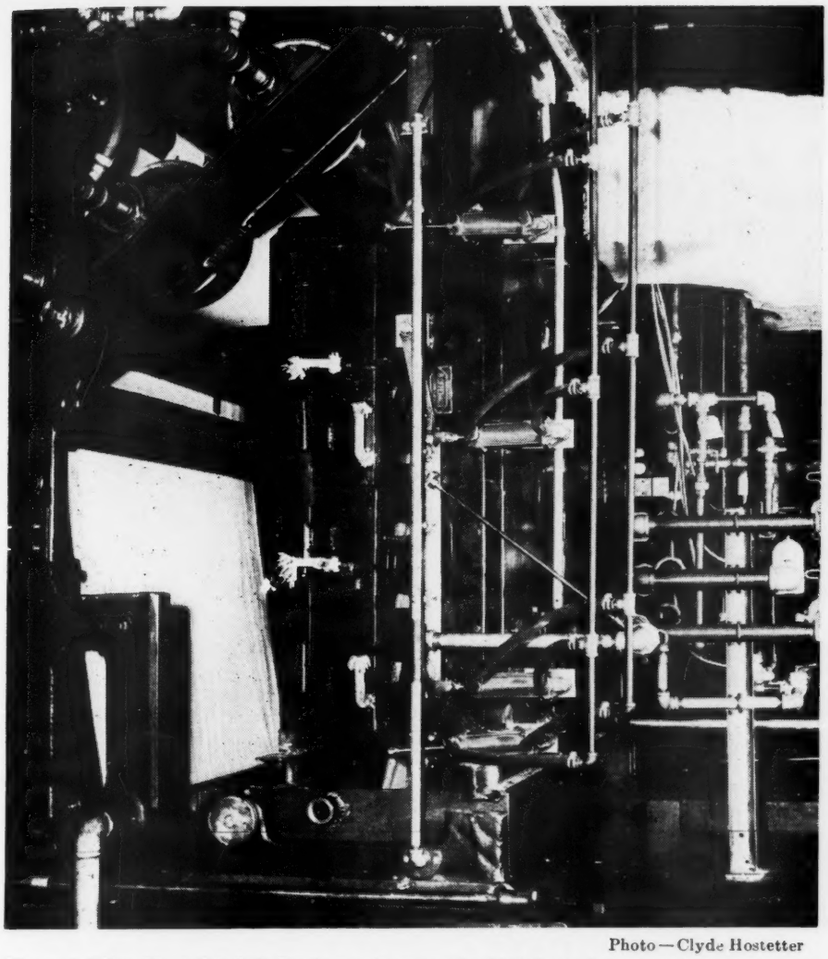
LINOTYPE abcdefghi 123

LINOTYPE abcdefghi 123

The Neoprene Notebook

FACTS about Neoprene adhesives and V-belts are contained in No. 42 of the Neoprene Notebook published recently by the Rubber Chemical Div. of E. I. du Pont de Nemours and Co., Inc. Also released is the Neoprene Notebook Index which is an alphabetized listing of the application of Neoprene to various products.

I. Tornberg Honored by Associates — I. Tornberg, Vice President and Sales Manager of the Wood Newspaper Machinery Corp., was honored recently by the Directors and Officers of his organization as well as his associates, at a dinner held in New York, N. Y. The occasion marked the completion of 30 years of service with that firm. Pictured above from left to right: R. G. Griffoul, Vice President in Charge of Manufacturing; P. L. Tollison, Vice President in Charge of Research and Development; Mr. Tornberg; O. C. Roesen, President; Nelson Maynard, Director and Chairman of Executive Committee; J. A. Isbell, Director; and Kirk McFarlin, Treasurer. Mr. Tornberg was presented with a gold wrist watch by Mr. Roesen on behalf of the Company.



Photo—Clyde Hostetter

View of Offen Heat-Set Ink Drying unit, two of which have been installed on a Goss rotary web-fed magazine press in plant of Capper Publications, Inc., Topeka, Kas., for printing *Capper's Farmer* in four colors on two sides of the web once through the press. Previously, the press was designed to print 64 pages in two colors, but with the addition of the two drying units and other modifications, the press now prints 32 pages in four colors on each side of the web. Advertising and editorial color demand prompted press conversion. MMM's Spherekote top sheets are used on all impression cylinders; second impression cylinders are equipped with oil-wipe units. The two water-cooled chilling rolls can be seen at upper left of the picture.

Magazine Press *modified to enable execution of four-color printing on two sides of web with heat-set inks*

By J. H. HORTON*

**Production Manager, Capper Publications, Inc., Topeka, Kas.*

THE need at Capper Publications for a faster and more flexible method of handling four-color printing had been felt for some time. In the past, we had been limited to using four colors for advertising only. That we might improve the appearance of *Capper's Farmer*, we felt that editorial four-color printing was a necessity as well as four-color advertisment printing facilities. All of our four color printing had been done by an outside printer on McKee presses, delivering flat sheets. This meant that we had an additional folding operation when we received the sheets in our plant and limited us as to just where we could place the color work.

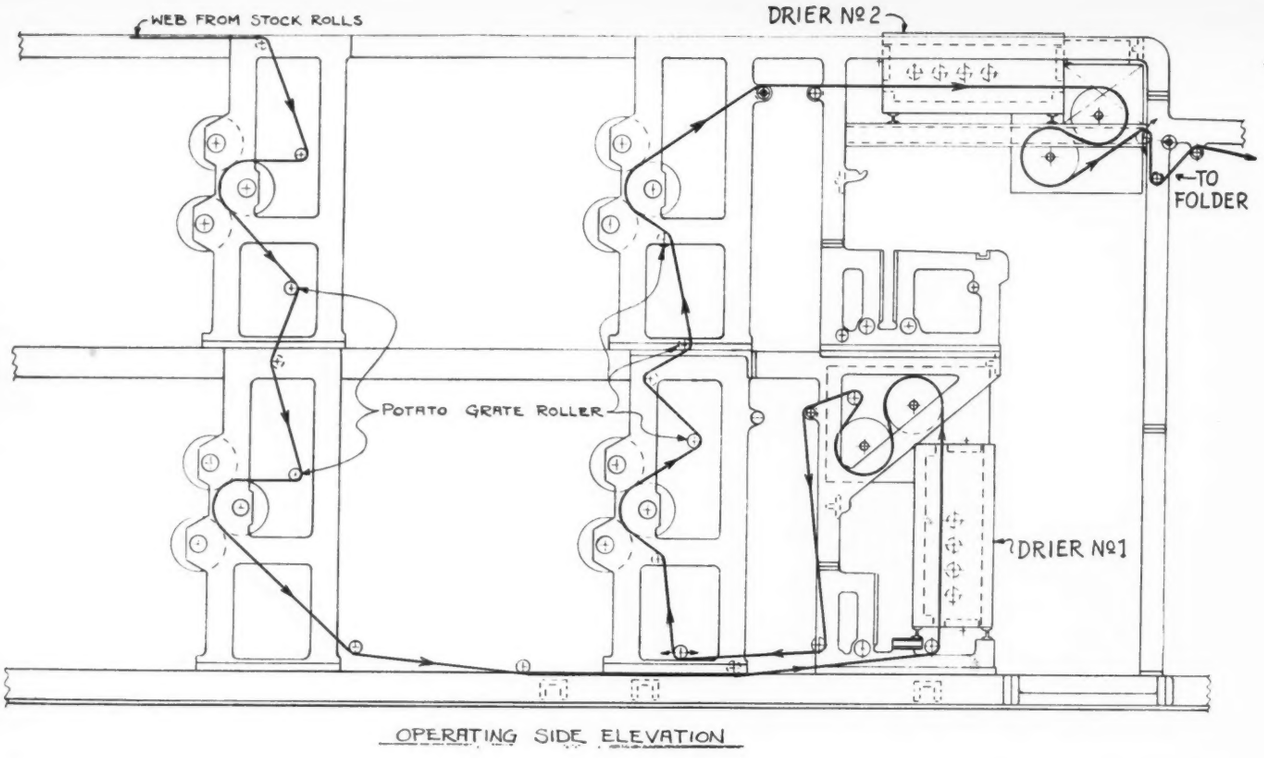
Some time ago we changed the size of one of our publications and sent it to an outside printer. This made available three 64-page, two-color magazine presses for *Capper's Farmer*. These are two-roll, two-deck presses, printing 16 pages, two-color on each side of the web, giving a total of 64 pages, two colors.

We decided to convert one of these 64-page presses to a 32-page, four-color press. This has been done by running one roll through four plate and impression cylinders on the one side, and through the other four plate and impression cylinders on the other side of the web. The yellow and red plates print on the same impression cylinder and the blue and the black plates print on another impression cylinder. The yellow and red plates are registered into each other, and the blue and the black are registered together. The register between the yellow, red and the blue and black is controlled by a compensator between them. Another compensator controls the backup of the first impression side of the web with the second impression side of the web. The controls for these compensators have been run forward to the folder so that the pressmen can reach them easily and quickly.

The problem of drying both sides of the web was accomplished by the installation of two Offen dryers. It was not possible, because of lack of space, to spread the presses apart between the first and second impressions so that we might position our first drier in this manner. However, we removed the traveling tympan equipment and placed the first drier in a vertical position in that space. This meant changing the web leads. We brought the web forward through the drier, down under the foot board, and up through the second impression to get the other side, (see diagram) and then through the second drier to the folder.

We contracted with B. Offen & Co., Chicago, to furnish two patents-applied-for drying units. At that time, delivery was set at four to five months. Shortly after, the opportunity arose to do some additional four-color printing in the December issue of *Capper's Farmer*. The drying equipment started to come in around October 1 and the press schedule for the December issue was November 1. The exhaust duct and outside stack were started and finished in time. The driers were installed and the electrical work completed around November 5.

We have more than enough heat and with the changes we have made, and are making, we are sure that we will have very little difficulty with burnouts and scorching on press stops. These driers are equipped with four ribbon gas flame burners in each drier. The burners are mounted so they move into position close to the web when running on speed and drop away as the press slows to a stop. They are amply supplied with safety switches so that gas cannot be pumped into the burners unless everything is working properly, thus obviating the danger of explosion. At the entering and exit sides of each drier are automatic dampers that open and close as the press is slowed down or speeded up. These dampers are used to hold the heat in the driers while running and to open and help expel excess heat when slowing to a stop. Both driers also have an automatic air pipe positioned at the entering side,



Side elevation diagram of Goss Magazine Printing Press in plant of Capper Publications, Inc., Topeka, Kas. Press has been modified to permit printing 32 pages in four colors (editorial and advertising) on two sides of the web with heat-set inks. Diagram is self-explanatory. Driers Nos. 1 and 2 supplied by B. Offen & Co. (patents applied for).

that opens and blows air through the driers as the press is slowed-down, to also help cool the drying units.

No particular difficulty is encountered with burn-outs or scorching in Drier No. 1, because it is mounted in a vertical position. Being in a horizontal position Drier No. 2 is more difficult to cool, but with the addition of a pipe blowing air through it, we feel that this has been overcome.

Each side of the web is cooled after leaving the driers by running it around two 15 in. diam. chilling rollers through which water runs. The water-flow through these rollers is controlled by motorized valve that opens when the press reaches running speed and closes as the press is slowed.

All pipe rollers over which the web runs before the ink goes through the driers have been covered with Steel Filet Potato Grater. This helps prevent smearing of the wet ink as it passes around these rollers before it is dried.

We are using Spherekote top sheets on all impression cylinders and the second impression cylinders are equipped with oil wipe units to help prevent offset and ink piling on the top sheets. The Spherekote top sheets also help control register as the sheet pulls better and truer around these cylinders.

All of our forms are plastic molded. From these plastic molds we make nickel electrotype plates curved to fit the cylinder. This is true of the four-color plates as well as the two-color plates. Some printers who have used plastic for four-color molding have complained of poor register. From our experience, I believe poor register is not in the plastic but does occur in the curving of the plates. We have found a variation in two reds, two blues, two yellows or two blacks that have had electro shells made from the same mold. The register variation has occurred in the difference of the stretch of the plate as it was curved. When this did happen we made new plates from the same mold to secure register.

Starting a new undertaking such as this where new drying equipment, new inks, and a new type printing are used, is quite an undertaking, especially when all of it was entirely new to our men. However, we feel they do a remarkable job. The first issue was a fairly good job. At the present time (February 1949) we are finishing the third run on this press. Each month the printing has improved. We feel that as we go along our work will continue to improve.

Our press speed has increased from 4500 to 7000 impressions per hour.

Holds Open House

Open house was held recently by the Atlanta (Ga.) *Journal* to climax a two-year building program and the installation of 16 Goss Multi-Color Headliner Units. The schedule for the open house was crowded with guided tours through the newspaper's plant, inspection by members and officers of the Georgia legislature, Georgia press day, and dedication cereomonies.

© Bachrach

Harry W. Porte, manager of the Pacific Coast Agency of Mergenthaler Linotype Co., has been named Director of Sales for the Company, succeeding W. H. Griffin who resigned due to pressure of private interests. For the last 15 years, Porte has been manager of the Pacific Coast Agency for Linotype. He is also Vice President of Porte Publishing Co. Porte attended the University of Cincinnati and has written numerous technical articles. He collaborated on the *Dictionary of Printing Terms*. He is a member of the Roxburghe Club and has served for many years as advisor to technical schools.

Mechanical and production executives are invited by the editor to submit informally in a letter, devices or methods devised in their plants so other executives may be helped.

TED DEALEY
Publisher of the Dallas
(Tex.) *Morning News*.

LEVEN T. DEPUTY
Mechanical Supt. and
Chairman Building Committee

Dallas *News* in New $6 Million Plant

THE spectacle of 16 new Hoe presses lined up dramatically in a 75 ft. by 200 ft. pressroom 43 ft. high without an obstructing column or pillar anywhere in the area may be pointed to by way of introduction to the fact that the new Dallas (Tex.) *Morning News* plant doesn't spare the horses when it comes to seeking modern equipment for the mechanical side of the approx. $6 million project.

The electronic press drive overlooks the pressroom from a glassed-in control booth—one of the first such press drives produced by General Electric.

It's worth the trip to Texas alone to see the *News*' new building—as if Texas hadn't marvels enough already to brag about!

The circumstance that a man with a mechanical background, Leven T. Deputy, was appointed by his publisher to the overall supervision of the new building in its construction phase has resulted in giving the production, or industrial aspect, every consideration it deserves in modern metropolitan daily newspaper publishing.

Construction of the new *News* building, on an advantageous site five blocks from the old location in downtown Dallas, did not actually begin until the groundbreaking in October, 1946. Before this, Deputy had been wrestling mentally with the project for about 13 years. The war delayed things.

Deputy recently has had bestowed upon him the title of Production Manager as well as Mechanical Superintendent of the *News*. In the final phase, the term "wrestling" could almost be taken literally, as Deputy went into the last lap of getting finishing touches on the building and completing the big move from the old plant into the new.

Visitors have been impressed with the *News*' straight-line gravity-flow production arrangement in general, and with other striking features.

G-E Press Drive

The G-E press drive, for instance, is housed on the second-floor level with a view into the pressroom. This equipment converts alternating current (a.c.) to direct (d.c.), for regulating the speed of the presses.

As Deputy remarks: "The drive is a kind of mechanical brain, or super-brain, in this vital respect. So far as I am able to determine, it is rated at about 95 per cent efficiency in conversion. Formerly, we thought we were doing well at 85 per cent.

"The control permits a steady flow of power at any given speed, which is essential to holding registration in newspaper color printing.

"And the *News* is looking forward to color printing playing a very important part in future production."

The press is a streamlined color-convertible super-production model, and has the flexibility of producing full color on any given page (3 colors and black). It weighs more than 1 million lbs. and cost about $1 million.

Considering the drive from the overall standpoint of the presses, we proceed this way:

First, you go through some bright Chinese-red doors, about 15 ft. high, into the control room. This room, or booth, (for one wall is a long glass window) is about 80 ft. long by 20 ft. wide, and like all arrangements for the new building, allows room for additional drives in the future.

Similarly, the pressroom is built to allow for possible future accommodation of two additional lines of 16-unit presses.

"Texas thinks in terms of growth, Suh," says Deputy.

Mechanical Department Executive Personnel, Dallas (Tex.) *Morning News*

WALTER ESRY	CECIL O. HILL	ROLAND J. HEBERT	MARTIN JOSCH	HARRY EASTUS
Asst. Mechanical Supt.	Composing Room Foreman	Stereotype Foreman	Pressroom Foreman	Mailing Room Foreman

Looking at it, the drive appears to you like a long row of lockers, but with irregularly shaped compartments. It is painted a buff color. While the bright red on the doors you enter might be psychologically a signal to people that there is danger in the room, there is no actual warning sign. But it's a locked control room, and young red-haired Robert Harrison, the new plant engineer for the building (he's 27 years old, a Massachusetts Institute of Technology graduate), particularly keeps one compartment of the cabinet locked and keys in his pocket. This is the section called the Ignitron.

Taking the control as a whole, there are four units measuring each 9 ft. 10 in. long, 9 ft. high and 4½ ft. wide. Each unit is like any other.

Here is the relationship between the control and the press:

These Hoe presses, as those in the field are aware, are arranged in octuples, with the middle two units being color convertibles. They are arranged in a line, so that any combination up to eight units can be run into a folder.

A common drive shaft runs through the line with mechanical disconnect clutches between all units and folders. Each unit and folder is driven by its own individual 40 h.p., d.c. motor. And the same motors are used, too, for inching, or moving the press very slowly.

Harrison Explains

Looking now at the drive for the press again, let's quote Plant Engineer Harrison, covering a few technical details and some general matters.

"The armatures of the motors," explains Harrison, "are 550 v., the fields are 250 v. Power for the motors is supplied by Ignitron rectifiers, which are controlled rectifiers. (A rectifier, it will be remembered, is the electrical mechanism which converts, or rectifies, the current from a.c. to d.c., etc.).

"Control is accomplished through vacuum tube circuits and the speed of the press is completely variable from threading speed through full running speed of 50,000 papers per hour.

"There are four rectifiers, including two 200 k.w. rectifiers and two 150 k.w. rectifiers.

"Flexibility is such that any combination of units and folders of these motors on the press can be obtained and properly driven."

Thus, as he points out, it is possible to have five units and folder, or run any six or seven or eight. Controls are push-button stations on the press and on motors on the press.

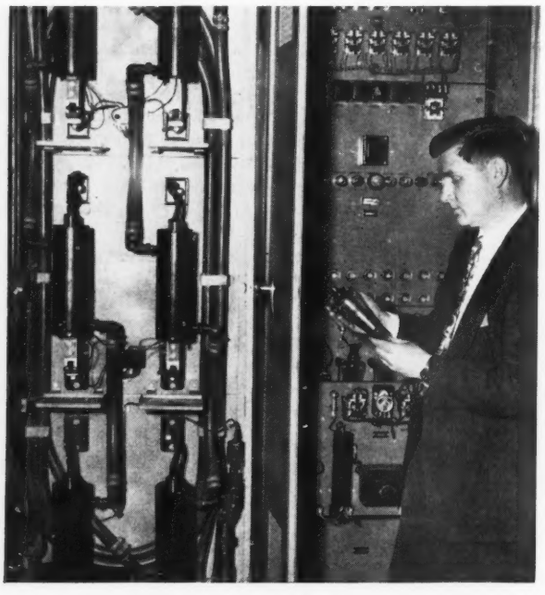
Stopping of the press is done through what is called dynamic braking resistors which are automatically thrown across the drive motors on emergency stops.

To dwell a bit further on the drive, Harrison adds:

"The cubicles in the drive cabinet (the thing that looks like a metal locker) consist of a main breaker, current limiting reactor, water-cooled Ignitron tubes, rectifier control circuits and field rectifier and press control circuits."

For those interested in a final technical note on the Ignitron itself, which is the key to the modern wizardry of the whole thing, there is this brief definition:

"The Ignitron is a mercury-arc rectifier in which the conduction is controlled by means of a third electrode called an igniter."



ROBERT HARRISON
Plant Supt. with Press Electronic Controls

Ideal Location

After 63 years in a congested neighborhood of office buildings and street car tracks, the Dallas *News* has got itself an ideal new location, at Young, Houston and Record streets, that combines breathing space with railroad facilities and access to highway arteries leading north and south, east and west.

The new building, architecturally imposing and stately, faces Ferris Plaza, a block-square downtown park. Diagonally across Houston Street (which flanks the building on the west) is the city's Union Terminal, and down the street from the latter is the Post Office Terminal Annex.

Landscaping

Newly planted perennial oaks and wide lawns set off the building in an ornate landscaping to which the *News* has allotted a 75 ft. by 200 ft. area in front of the building. The entire area of the site occupied by the *News* is 200 ft. by 1000 ft. Parking space in the rear is provided for 277 employees' cars, without interference with the operation of the plant.

Imposing Entrance

You enter the building over wide stone steps, which have the sweep of a great governmental building or museum, and you are in a spectacular lobby 100

ft. long and two stories high. The lobby is adorned with rich-looking Tennessee marble, and overhead is a huge mural encircling the walls, symbolically interweaving the story of the *News*—Texas' oldest business institution—with the history of printing and the economic growth of Texas. A great Lone Star is set in the terrazzo tile floor, with the Dallas *Morning News*' Old English logotype inlaid in a circle around it.

Two Buildings in One

The *News* building (which actually is two buildings) consists of three floors and a basement, with the possibility of adding eight more floors onto the building which houses the business and news offices. The whole building is air-conditioned, and the cooling tower rises to a seventh floor level.

Height is 104 ft. 5 in. to the top of this tower. There are 227,917 sq. ft. of space, or about 5 A., and the structure encloses a capacity of 3½ million cu. ft.

Modern Otis elevators take you from the lobby to the third floor. Here are the news departments, and across a corridor from the news room is the composing room. Here is where the *News*' straight-line production begins.

What appears to be a corridor, however, is more than that. The mechanical, or industrial, part of the plant has been completely separated from the business portion by an architectural device called an expansion joint, or an isolation wall. Its purpose is to keep all vibration and noise, particularly from the presses, out of the business, or white-collar section.

Anti-Vibration Press Support

In this connection, it is interesting that to insure further against vibration, a special floating foundation was built for the pressroom. Under the line of presses, beneath the slab of concrete which is its immediate foundation, is a pit containing 11 in. of dry sand; and the sand, in turn, rests on a slab that sits on a bedrock bottom of native subterranean Dallas blue rock. The sand-pit foundation is designed to assimilate vibration. Similar covered pits were built in the space earmarked for future possible presses.

Anti-vibration considerations were given serious attention, since the *News* owns a radio station, WFAA, and while this is now housed in studios in a downtown office building (the Santa Fe Annex), the thought has been that, at some future date, the radio operation might be brought under one roof with the publishing activity—occupying additional floors to be added to the business unit of the new building. In such event, it would be vital to safeguard against trouble from the roar and rumble of the presses.

Gravity Production

Your mechanical tour of inspection properly starts at the third floor level—as has been said—because the whole production process begins here and moves downward. It's in a straight line and in the natural direction of gravity.

Crossing the few feet from the news side to the composing room, you are in a space 16 thousand ft. sq. And once again, the *News* has achieved for this space, as for the pressroom, a working territory of well over 75 ft. by 175 ft. without a single obstructing pillar. Twelve-ton trusses supporting the composing room make this possible.

Two Buildings in One—Such is the construction of the new home of the Dallas (Tex.) *Morning News*. It's divided into industrial and office sections with an isolation wall between to keep mechanical vibration from the office section. All sections will be kept cool by 300 T. of Carrier air-conditioning.

Building is situated on a 200 ft. by 1000 ft. lot. Overall dimensions of the building itself are 194 ft. by 303 ft. Its style is simplified modern. Its three stories high with penthouses atop. Granite from Minnesota and Indiana limestone face the business section of the building.

All lighting in the building (with exception of the pressroom) is fluorescent. Pressroom lighting is incandescent.

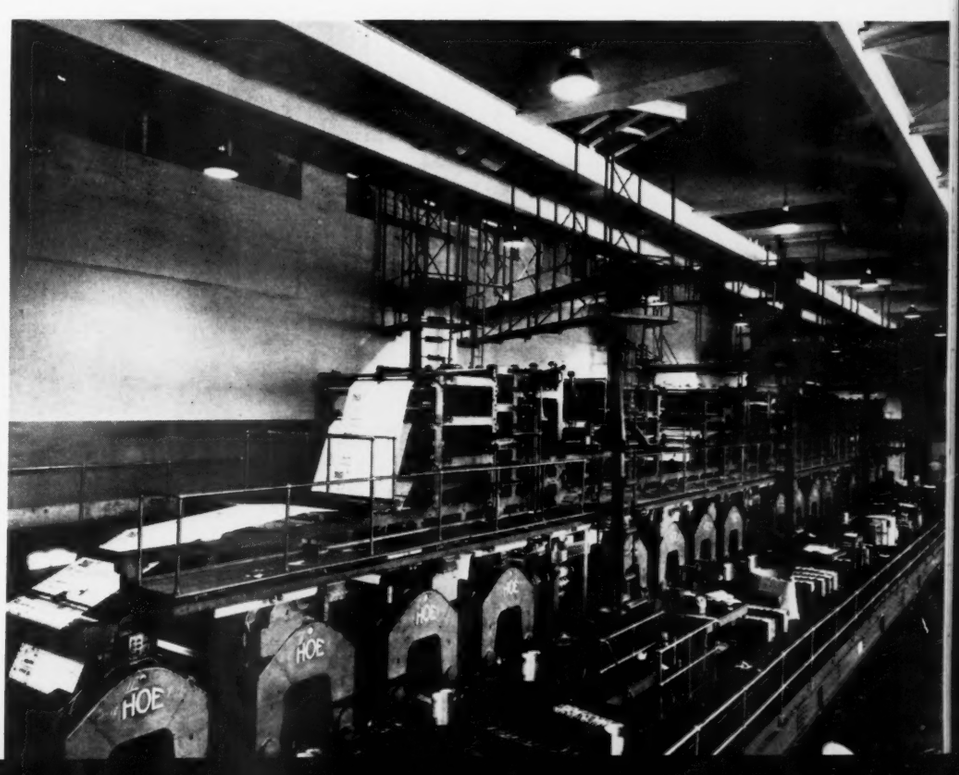
Composing Room

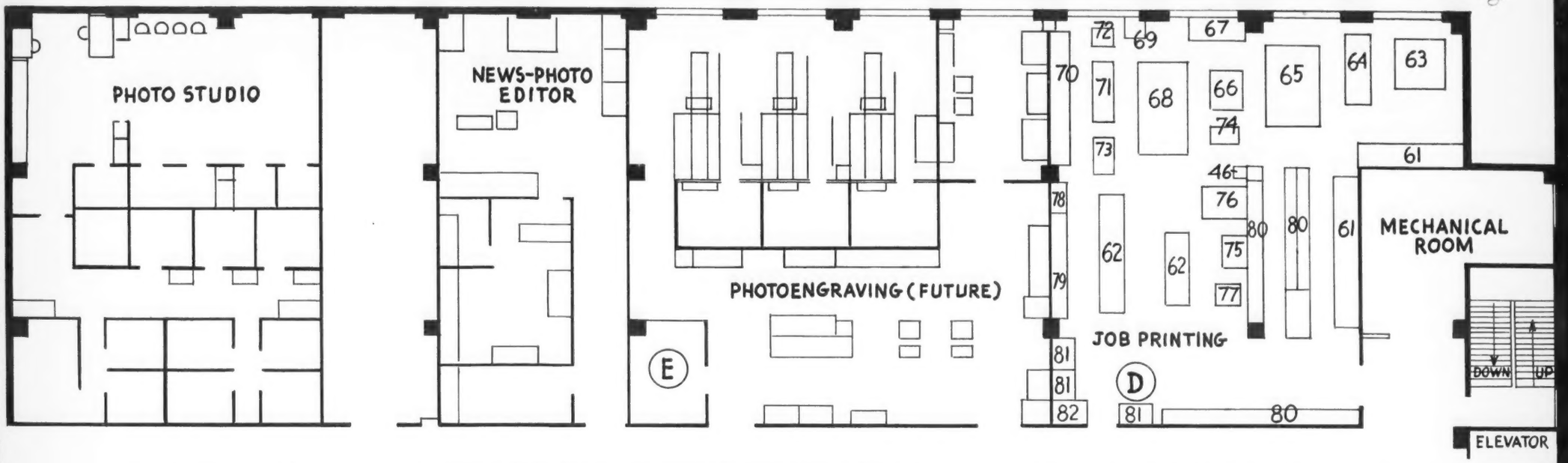
Actual production area in the composing room is about 12 thousand sq. ft., and in it is accommodation for 60 line-casting machines.

Eighteen Intertypes are for advertising composition, including F machines, Gs, Cs and 2-Fs, and the other 42 are for news. Twenty-eight Intertypes were moved over from the old building. While

General View in Pressroom of Dallas (Tex.) *Morning News*

In line are 16 Hoe press units. Operation of this million dollar press is accomplished by General Electric electronic press drive. This equipment converts a.c. current to d.c. current for regulating speed of the presses. Press is stream-lined color-convertible model. Press will print 140,000 or 180,000 papers per hour of 4 to 32 pages inset products from four deliveries, or 70,000 to 90,000 papers per hour of 36 to 80 pages in two even sections; there are, of course, intermediate setups. Entire press has capacity of 320 stereo plates. At average 50 lbs. per plate, when fully dressed the press carries approx. 8 T. of stereo metal.





(*Printing Equipment Engineer* wants to explain to readers that the two sectional diagrams shown on these two pages represent one continuous floor plan but have been split on two pages to permit larger reproduction. A continuous hallway extends between the two sections.)

Streamlined Production Flow Has Been Achieved in Plant of the Dallas (Tex.) *Morning News*—News copy flows from desk *1*, is sent to the Intertype straight-matter machines, goes to the dump, the proof press, correction bank, then to the makeup bank. Ad copy comes from the Dispatch Room (C) and goes immediately to the ad copy desk *21*, to ad machines, to assembly work tops or trucks, to proof press, to ad correction bank, to makeup bank.

Both news and ad composition flow from banks to the makeup trucks into the Stereotype Department. Department Heads and Equipment are identified as follows:

Job Printing Dept. (Above):

(D)—Job Foreman

61—Stock storage shelves
62—Tables
63—Paper cutter
64—Cutting table
65—Miehle press
66—Platen press
67—Utility press shelf
68—Kelly press
69—Ink cabinets
70—Form storage
71—Makeup stone
72—Saw-trimmer
73—Makeup table
64—Stock table
75—Stitcher
76—Perforator
77—Paper punch
78—Type cabinet
79—Mimeograph equipment
80—Printed form storage
81—Desks
82—Filing cabinets

Photoengraving Dept. (Above):

(E)—Photoengraving Foreman

While the *News* presently is not operating its own photoengraving plant, provision has been made in the new building for such operation. Space opposite the composing room has been set aside for a three-camera layout. The room measures 50 ft. by 50 ft.

(A)—Composing Room Supt.
(B)—Stereotype Foreman
(C)—Dispatch Head
(F)—Chief Composing Machinist

Composing Room:
(Diagram Below)

1—News copy desk
2—Headletter Intertype
3—Ring machine
4—Intertype News Machines
5—Future line-composing machines
6—News dump
7—News proof presses
8—Correction bank
9—Makeup dumps
10—Makeup tables
11—Makeup trucks
12—Makeup trucks
46—Wash basin
21—Ad copy desk, mats and cuts to and from Dispatch Room (C)
22—Intertype ad machines
23—Future ad line-composing machines
24—Ad hand compositors
25—Rouse Mitering machines and C. & G. saw-trimmers
26—Future ad hand compositors' work tops
27—Ad proof press
28—Ad storage
29—Rouse Band Saw
30—Band saws for cuts
78—Bubbler

Monotype Room:
32—Type and/or strip storage

Stereotype Dept.:
B—Stereotype Foreman

Flat-casting Room:
38—Flat shavers

47—Wood Color Plate Pre-Registering Machine

72—Saw-trimmer
73—Makeup table
64—Stock table

operation. Space opposite the composing room has been set aside for a three-camera layout. The room measures 50 ft. by 50 ft.

7—News proof presses
8—Correction bank
9—Makeup dumps

29—Rouse Band Saw
30—Band saws for cuts
78—Bubbler

Monotype Room:

32—Type and/or strip storage
33—Work bench
34—Monotype Material Makers (future machine indicated by dash lines)
35—Monotype Giant type casters (future machine indicated by dash lines)

Remelting Room:

36—Remelting pot
37—Pig molds
46—Wash basin

Stereotype Dept.:

B—Stereotype Foreman
13—Mat molder
14—Mat cabinet
15—Mat packing tables
16—Mat trimmer
17—Flat scorchers
18—Stahi formers
19—Wood plate-casting pot and boxes with Wood Heavy-Duty plate shavers
19*A*—Pneumatic plate carrier
20—Future duplicate of No. 19 equipment

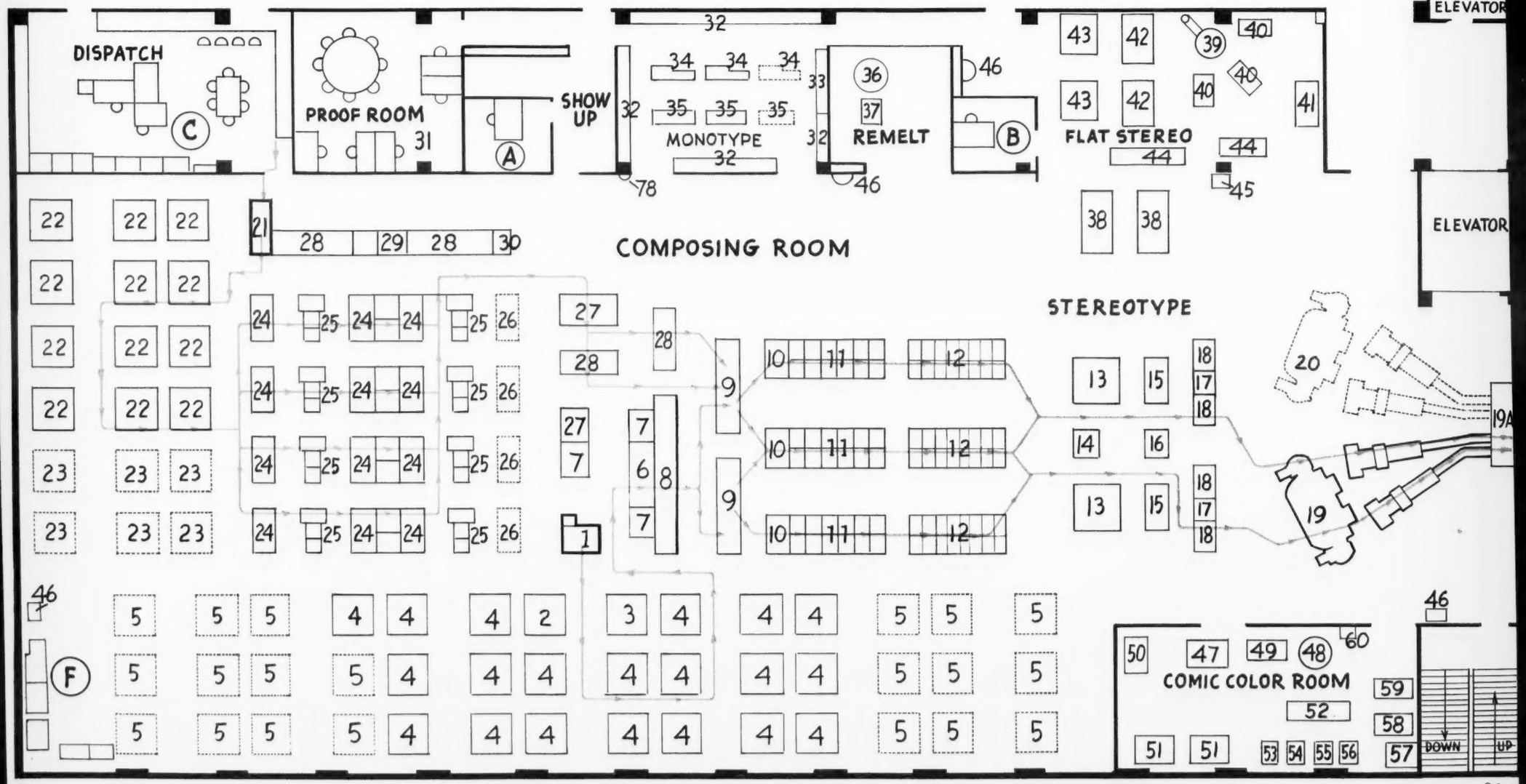
Flat-casting Room:

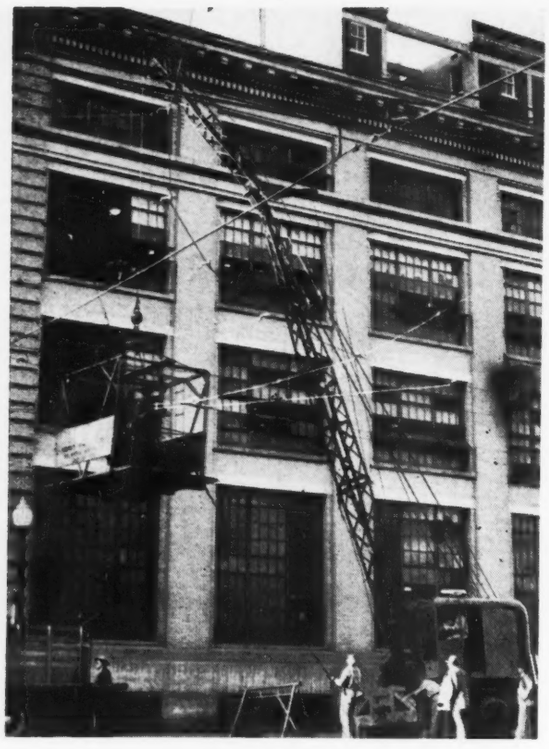
38—Flat shavers
39—Metal pot
40—Flat casting boxes
41—Flat scorcher
42—Saws
43—Flat router
44—Table
45—Jig saw
46—Wash basin

Color Plate Room:

46—Wash basin

47—Wood Color Plate Pre-Registering Machine
48—Metal pot
49—Double page casting box
50—Tail cutter and borer
51—Routing machines
52—Table
53—Anodic cleaner
54—Water rinse
55—Acid dip
56—Water rinse
57—G.E. oxide cleaner
58—Plating
59—Rinse sink
60—Heater





First of 28 Intertypes is lowered from old Dallas (Tex.) *News* building. Thirteen hours after first Intertype was moved on March 20, the twenty-eighth was set in place in the new composing room. Average time was better than 25 min. per machine. "I don't believe it has been equaled," said Mechanical Supt. Deputy.

60 are provided for, actually in use at present are 12 ad machines and 34 news.

There is an ad assembly area with work tops to accommodate 32 ad men in an area 38 ft. sq.

The proofing area accommodates 4 proof presses besides page-size presses. The makeup area is large enough to take care of 72 forms at any one time.

Outside of this area is the dispatch department, where display advertising is prepared for the ad room. Delivery to the ad foreman's desk is immediately through an open window. It is just 3 ft. from the ad foreman's desk to the dispatch department.

Adjacent to the dispatch department is the proof room. This has desks for 16 readers.

The foreman's office and the show-up area come in the mathematical center of the composing room.

You go down the line to the Monotype department, which will accommodate 6 machines and storage facilities. Then comes the re-melting room, which is immediately adjacent to the area allocated to dead forms.

Annunciator System

By means of what is called an annunciator system, the pressroom, composing room, as well as the news room, of the Dallas *Morning News*' new building know at a glance how far along an edition is in number of completed page forms moved from makeup to the stereotype department.

Each of the three rooms has an electrically-operated panel-light board. Each board contains eight rows of lights which light individually to show numbers. The top four rows run from 1 to 24 each, and the second four from 1 to 16. Thus, the annunciator can handle four 24-page sections and four 16-page sections.

Included in the mechanism of each board is a warning bell for a quick makeover.

Here is the system:

When it is determined how many pages and sections will be in the paper, each department concerned is notified. Then lights for all pages to be made up are turned *on* in the editorial department and the makeup department in the composing room.

As each page is made up and sent to the stereotype department, the light is turned off—and corresponding lights in the pressroom are turned on. This alerts the pressroom. Thus, the paper is fully made up when all lights are off in the editorial and makeup rooms, and when all lights are on in the pressroom.

Controls for the system are in the makeup department of the composing room. Lights are operated by finger switches. The master board is in the composing room. The board in the pressroom is on the south wall, adjacent to the plate drop.

The news room board is located so that it is visible from city, universal, sports, managing editor and assistant managing editor's desks.

The *News*' annunciator system was planned and built locally to the paper's own specifications. Each one of the 150 lights requires a separate circuit from master board to both stations.

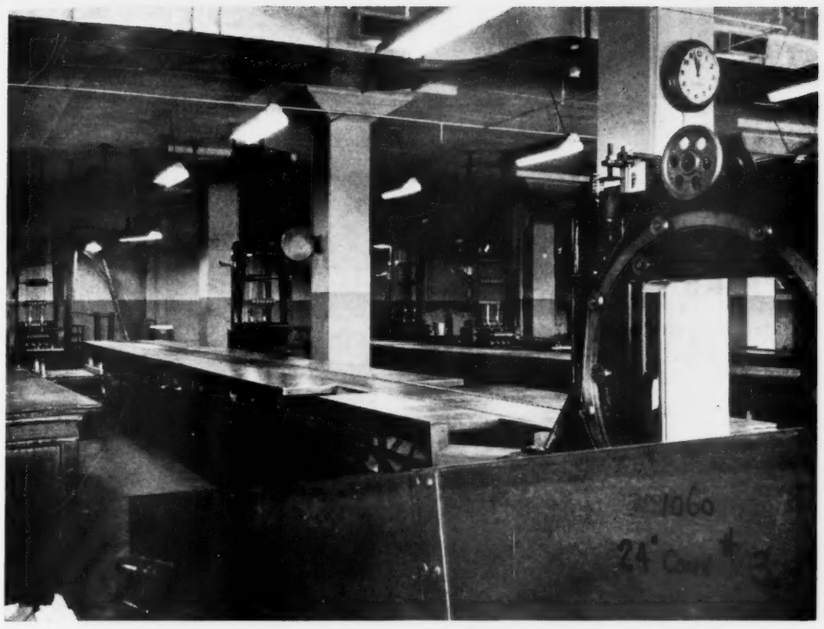
Stereotype Dept.

Beyond the composing room is the stereotype foundry, which has accommodation for two 10 T. pots, four Junior casting units and four shavers. This equipment was furnished by the Wood Newspaper Machinery Corp.

The flat casting room follows immediately the area to the south of the remelt and composing room, with the office of the stereotype foreman conveniently located. The flat room is equipped with dual machinery, including saws, flat routers, shavers, casting boxes and metal pots.

All metal pots in the stereo foundry are equipped with Kemp immersion burners under automatic control.

View of railroad unloading dock on the Houston street side of new Dallas *News* building during final construction phase. This dock extends 157 ft. behind of the industrial section of the building. Here newsprint is unloaded.



View in greatly mechanized mailing department of the Dallas (Tex.) *Morning News*. When the papers are brought from the new Hoe presses by conveyor, the mailers place them on one of the two 50 ft. Jampol electrically-driven continuous roller conveyor. The rollers in the center of the Jampol conveyor table are identifiable in this picture. The papers in certain predetermined quantities have an upper and lower wrapper placed around them before passing into the Signode Wire-tying Machine shown at the right. Operates at 20 bundles per min. After the bundle has been tied, the mailer starts it down an adjustable chute where it is delivered into one of a number of trucks. The top section of one of the chutes leading to the loading platform is shown in the lower front part of this illustration.

The complete foundry includes an area designed to accommodate color plate-making and nickel plating. Herein are housed all of the machines and facilities to perfect the best plates obtainable for correct color printing.

The *News* has installed a direct pressure molding machine, an Inframatic mat conditioning unit, as well as the usual Sta-Hi mat formers.

Says Deputy: "Every endeavor in the foundry has been directed to help produce the best plate possible for fidelity in reproduction."

Floors and Flooring

Both the composing room and stereotype department have floors of wooden creosoted blocks, about 2½ in. thick by 3 in. by 5 in. The relative resilience of the blocks is less tiring on the feet. Otherwise, asphalt tile flooring is used throughout the building (except the operating level of the pressroom, where Feralun plates are used).

Incidentally, the floors have been designed to support loads varying from 150 lbs. per sq. ft. in the offices up to as high as 400 lbs. per sq. ft. pressure in the industrial section.

Once the plates are ready in the stereotype department, automatic plate drops (furnished by the Jampol Company) take them on a little elevator ride to the next floor below—the pressroom.

The Pressroom

Visitors to the *News* building will be able to view the pressroom from an observation balcony at the north end. But only the trained observer will appreciate the great expense and forethought which the *News* gave to the problem of creating the unobstructed area.

Girders 7 ft. thick and weighing 35 T. apiece were mounted so that they would connect the outside columns of the building in order to make it possible. It took something of the heavy engineering that goes into bridge-building.

Along with the 16 units of this Hoe press go four folders, two equipped with double delivery and two with switch delivery. The double-delivery folder can deliver two 32-page papers at double the running speed.

This Hoe press is equipped with automatic reels, tensions and pasters. An electric eye is used for the timing of roll positions.

It will enable the *News* to print at the following running speeds:

140,000 or 180,000 papers per hour of 4 - 6 - 8 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 pages inset products from four deliveries;

105,000 or 135,000 papers per hour of 30 - 32 - 34 - 36 - 38 - 40 pages inset products from one delivery;

105,000 or 135,000 papers per hour of 8 - 12 - 16 - 20 - 24 - 28 - 32 - 36 - 40 - 44 - 48 - 52 - 56 pages in two even sections;

70,000 or 90,000 papers per hour of 36 - 40 - 44 - 48 - 52 - 56 - 60 - 64 - 68 - 72 - 76 - 80 pages in two even sections.

The entire press has a capacity of 320 stereotype plates. Taking a figure of about 50 lbs. as the weight per plate, the fully dressed press carries approx. 8 T. of stereotype metal on it in printing the paper.

At the press operating level is a machine shop, 75 ft. by 20 ft., to serve the press. The press superintendent has a 12 ft. by 25 ft. office. Excellent restroom, washup and shower facilities are provided for pressmen.

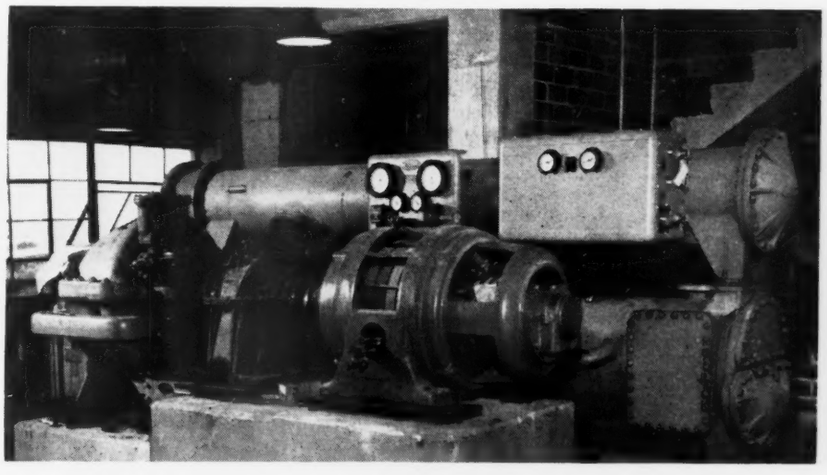
Built by R. Hoe & Co., the *News*' press was under construction from about February to August, 1947. Shipped by sea-train to Texas, it was received and stored by the *News* in September that year, and came out of storage in May, 1948.

The *News* began printing the paper on the new press in the new building last November 17, or about four months before the composing room, news and other departments went into the new building March 19 and 20.

Mailing Room

Seven conveyors are available to carry the newspapers from the point where they roll out of the presses up two stories of height to the first-floor mailing room.

(Continued on Page 64)



Air-conditioning equipment in new plant of Dallas (Tex.) *News* is housed in fifth floor level of penthouse, or cooling tower. Here is shown a Carrier unit.

Joint PNPA-NJPA Mechanical Conference

SHOWING deep concern with the high production costs in newspaper mechanical departments more than 420 mechanical department executives from plants in five states met in Harrisburg, Pa., for two days, April 1 ans 2, to learn ways to offset this present-day problem in newspaper manufacture. These men represented daily and weekly newspapers published primarily in Pennsylvania and New Jersey, but included several from other states.

This conference, the first to be jointly sponsored by the Pennsylvania Newspaper Publishers' Assoc. and the New Jersey Press Assoc., is successor to the separate conferences previously conducted by these state groups. In joint charge were Paul V. Driscoll, Chairman of the PNPA Mechanical Committee and Mechanical Supt. of the Connellsville (Pa.) *Courier*, and Neal E. Dyer, head of the New Jersey Mechanical group, and Mechanical Supt. of the Camden (N.J.) *Courier-Post* papers.

So successful was the conference both on the basis of attendence and work accomplished that the joint conference idea will be continued next year with preference for a Spring meeting either in Philadelphia or Atlantic City. Mr. Driscoll, will continue as PNPA chairman, but a new group was elected during this conference to serve the New Jersey organization. The new committee is as follows: Donnell P. Shortell, Mechanical Supt., Asbury Park (N.J.) *Press*, elected President of the N. J. Mechanical Dept., succeeding Mr. Dyer; William Jones, Salem (N.J.) *Sunbeam*, succeeding Mr. Shortell as Vice President; and Herbert E. Cox jr., Press Supt., Plainfield (N.J.) *Courier-News*, as Secretary, succeeding William C. Rolle, Newark (N.J.) *News*.

The annual conference is directed by Theodore A. Serrill, PNPA Associate Manager.

Photography and Photo-Engraving

In the opening session, on photography and photoengraving, Stanly Myers, Asst. Mechanical Supt. of the Philadelphia *Bulletin*, noted that television is making rapid strides and promises to become tougher competition for newspapers.

Later in the conference, Vernon R. Spitaleri, Acting Manager of the ANPA Mechanical Dept., explained the work of the AAAA-ANPA Committee in improving reproduction in newspaper art. Copies of the first brochure prepared by the committee were distributed to the delegates.

Mr. Myers gave a brief description of the Poloroid Land Camera which takes, and prints within itself, a 3¼ in. by 4¼ in. photograph in 1 min.

A film on Xerography was shown by C. R. Ward, Manager of the Philadelphia branch of the Haloid Company.

Photoengraving Survey

A report of a PNPA survey conducted in connection with the conference by Mr. Serrill revealed that newspaper-owned engraving plants in Pennsylvania and New Jersey were very much alike in many respects. For example, all 18 participating in the survey used cold top enamel, one making a home-made cold top, the remaining purchasing a commercial brand. All but two of the plants reproduce newspaper cuts on 65 line screen. They varied greatly, however, in the number of bites taken on halftones and in the length of exposure used.

Defied Everybody

The committee prepared and printed on a regular newspaper sheet three cuts of a news picture—one made by the Fairchild process, one by conventional engraving methods on zinc and one on magnesium. Copies were distributed with many delegates present unable to determine which cut was made by which process until identified by Chairman Myers.

J. R. Cubbison, Mechanical Supt., Sharon (Pa.) *Herald*, and a practical engraver in charge of that paper's photoengraving department, with the help of Ludwig E. Lippert, photographer-engraver with the *Valley Daily News*. Tarentum, Pa., and Richard E. Rentz, co-Publisher of the New Castle (Pa.) *News*, conducted a panel discussion.

During this discussion, William Ahlstrom, Chester (Pa.) *Times* Photographic Editor, revealed that the recent installation of a Fairchild machine has helped increase that paper's photographic department from a part-time man to a four-man staff. Use of news pictures in the *Times* has increased 440%.

Composing Room Session

Under the direction of Hans E. Rosberg, Mechanical Supt. of the Norristown (Pa.) *Times Herald* and Mr. Shortell, co-Chairmen, the conferees participated in a discussion stimulated by talks from an advertising manager and a city editor.

Richard J. Welsh, City Editor of the Norristown daily, told how his desk endeavors to provide an even flow of copy.

Giving the advertising angle, A. J. Schaff, Ad Director of the Hagerstown (Md.) *Herald-Mail* newspapers, stressed the importance of cooperation between the composing room and his department, saying "if there is reasoning and give-and-take attitudes, the results will be astounding both from the standpoint of production and controlled tempers."

Continuing this theme of cooperation between departments, Walter C. Crighton, Secretary of the New England Mechanical Conference and Composing

Awards for Advertising Performance

The Cleveland Advertising Club has initiated a plan designed to encourage the preparation of more effective advertising, according to Grant Stone, President of the Club. Entries for the project consist of advertising of all types from any industry used during 1948. Awards will be based upon the results accomplished by the entrant's company. Officials of the club remind entrants that this is not a contest. Evidence of results must be supplied. Printing Equipment Engineer understands this is the first objective of its kind ever to have been announced. The plan should encourage increased utility and practicability by sponsor companies in preparing their promotional material. Awards will be bestowed upon entries solely upon the merit of the entry without respect to any other entry which has been submitted. Closing date for all entries was May 15th. Plaques will be awarded to advertisers whose campaigns are judged to most adequately meet the stated objectives. Merit certificates will be given to the individuals responsible for planning and preparing the advertising. Only advertising that has been planned and produced in Cleveland was entered in this award plan.

Want Simpler Machine

(Abstracted from address by B. F. Garrity, Production Manager, Gannett Newspapers, before PNPA Mechanical Conference, Harrisburg, Pa., April 1949.)

FOR a great many years newspapers have insisted that manufacturers of typesetting machines increase their size and make it possible to do a great deal more work on the keyboard. In order to do this, the manufacturers had to make these machines a great deal more complicated. Naturally, a more complicated machine requires expert attention. I think now that we have these machines we should start to look towards a much simpler machine which would take care of body type and would carry at least two magazines. I feel quite sure that such a machine can be built in the future to take care of this situation.

Photostat Ad Copy

(Abstracted from address by B. F. Garrity, Production Manager, Gannett Newspapers, before PNPA Mechanical Conference, Harrisburg, Pa., April 1949.)

IN some of the larger newspapers photostat machines have been installed to furnish the composing room with several copies of an ad to speed up its setting. As these machines are expensive, a pretty good size newspaper is required to make this saving possible. There is a low-priced machine on the market that I understand can be purchased in the neighborhood of $100. The paper is made by Eastman Kodak Co. The machine is simple to operate. I really think it is going to mean a saving to the smaller newspapers if they take advantage of it.

Room Supt., the New London (Conn.) *Day*, said: "More attractive newspapers are the result of the cooperative efforts of all departments, mechanical, editorial, and advertising."

Points to Expensive Practices

Enthusiastic applause greeted Bernard F. Garrity, Production Manager, Gannett Newspapers, Rochester, N. Y., who gave a straight-to-the-shoulder talk on "Good Management and Its Relationship to Costs."

"The most expensive thing you can do is to have an early edition, "he said. "You can save more money by cutting out your early editions than anything else."

He also called for a reduction in makeovers.

"It would seem to me," he declared, "that if we are going to save or cut expenses, it will be necessary that we begin in the publisher's office and work down through the editorial and ad departments, because without the cooperation of these departments, we will be foolish to expect to make any impression on our present labor and paper costs."

He advocated ad solicitors be taught they are "working for newspapers" and that they be taken into composing rooms and shown what it means when changes are made in ads.

Success With Teletypesetter

Harlan Rowe, Mechanical Supt., Sayre (Pa.)-Waverly (N.Y.) *Evening Times*, described the success his paper has had with the installation of Teletypesetter equipment. He said in part: "We have completely eliminated overtime on straight matter and nearly all overtime on ad composition and makeup without increasing the number of machines in our composing room. Press deadlines are being met more consistently and earlier than ever before even though page production is better.

Trains Operators to Make Repairs

William H. Means, Machinist-Operator for the Bradford (Pa.) *Era*, told how operators in his plant are trained to make minor repairs. According to him, "Too many machinists jealously guard their repair abilities. Operators can be a great help in keeping machines in good running order. Operators don't get squirts so often if they have to clean them up themselves."

Smaller City Session

A Saturday afternoon session for smaller city newspapers also was largely devoted to composing room problems, with some talk on press-stereo matters. This session was in charge of George T. Wegemer, Mechanical Supt., St. Marys (Pa.) *Press*; Charles W. Shultz, Composing Room Foreman, Lock Haven, (Pa.) *Express*; and John L. Halstead, Mechanical Supt., Charleroi (Pa.) *Mail*.

(Continued on Page 62)

Some Mechanical Executives in Attendance at Annual PNPA-NJPA Mechanical Conference Held in Harrisburg, Pa., April 1 and 2

1.—Fred M. Humphrey, Mechanical Supt., Philadelphia *Daily News;* Hans E. Rosberg, Mechanical Supt., Norristown (Pa.) *Times Herald;* Joseph Cubbison, Mechanical Supt., Sharon (Pa.) *Herald,* and John L. Halstead, Mechanical Supt., Charleroi (Pa.) *Mail.*

2.—Rudolph E. Lent, Business Manager, Jersey City (N.J.) *Journal;* George T. Wegemer, Mechanical Supt., St. Marys (Pa.) *Press;* John Penry, Stereo Supt., and William C. Rolle, Press Supt., Newark (N.J.) *News;* and Samuel D. Evans, Production Mgr., Lebanon (Pa.) *News-Times.*

3.—Paul V. Driscoll, Conference Chairman and Mechanical Supt., Connellsville (Pa.) *Courier;* Neal E. Dyer, co-Chairman, and Mechanical Supt., Camden (N.J.) *Courier-Post* Newspapers; C. M. Flint, Research Director, ANPA; Charles Frederickson, Mechanical Supt., Westchester County Newspapers, New York; D. Philip Young, Publisher, York (Pa.) *Dispatch;* Edward A. Gase, Press Supt., *Valley Daily News,* Tarentum, Pa.

4.—Charles W. Shultz, Composing Room Foreman, Lock Haven (Pa.) *Express;* Ralph Cranmer, Business Manager, Williamsport (Pa.) *Grit;* A. E. Holtzinger, General Mgr., Altoona (Pa.) *Mirror;* Frank A. Donnelly, Mechanical Supt., Metro Associated Services, Inc.; Roy Prince, Head, ANPA Research Laboratory, Easton, Pa.; Herbert G. Taylor, Production Mgr., Bethlehem (Pa.) *Globe-Times,* and Vernon R. Spitaleri, Acting Manager, ANPA Mechanical Dept.

EQUIPMENT & SUPPLIES

G-S Magnetic Probe

GENERAL Scientific Equipment Co. has announced an instrument called a Magnetic Probe for use within the shop or laboratory. The G-S Probe is designed for removing steel or iron particles from areas of a machine or

Magnetic probe announced by General Scientific Equipment Co. for removing steel and iron particles from the human body or from machine work areas.

the human body (such as an eye) where such foreign matter is harmful.

Made of super-magnetic alloy, the instrument is no larger than an ordinary fountain pen. Point of the magnet is extended or retracted from a Bakelite case by turning an end-knob. Strength of the magnet can be controlled by the amount of the extension. *Printing Equipment Engineer* will furnish further information upon request.

Easy See Safelights

BEATTIE Process Camera Corp. has announced a safe light for photographic darkrooms that permits inspection of the film during the last 20 sec. of developing. The wet negative is lifted out of the tray and placed on the glass front of the safelight which the manufacturer claims will remain cool. Glass size is 20 in. by 24 in. and light source is a special tube lighting element.

The Easy See Developing Safelights are for use with 115 v., a.c., only and are available with red, ruby or yellow colored lights.

Printing Equipment Engineer will gladly furnish additional information to anyone interested upon request.

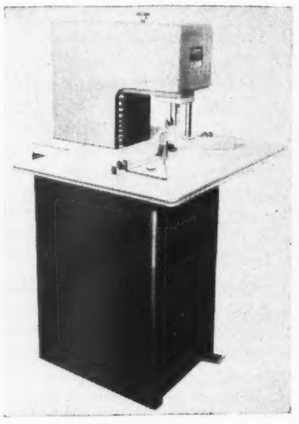
Sequence Charge Control

THE sequence charge control, a device for doubling the charging capacity of G-E truck battery chargers, has been announced by the Lighting and Rectifier Divisions of General Electric. The device makes it possible, claims the manufacturer, to charge two fully discharged batteries in 13 hrs. from a single rectifier. A switch makes it possible to restore the basic characteristics of the original charger so that a single battery can be charged in eight hours. Further information may be obtained by writing *Printing Equipment Engineer*.

Hydro Corner Cutter

SUPER Speed Printing Machinery Inc., has announced an automatic, hydraulically powered corner cutting machine. A hydraulic system is used in the Hydro Corner Cutter.

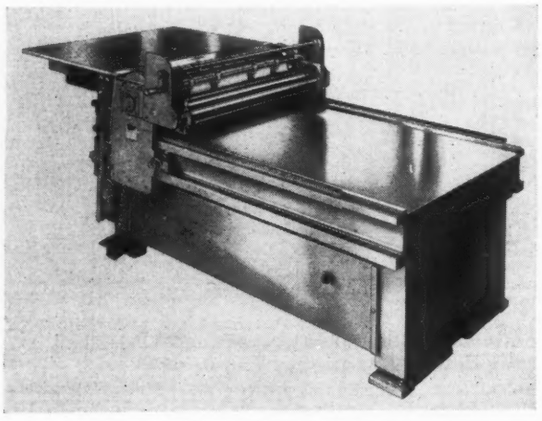
Specifications are as follows: table size, 24 in. by 32 in.; overall floor space,



Hydro Corner Cutter announced by Super Speed Printing Machinery, Inc., for rounding corners on stock.

31 in. by 40 in.; overall height, 56 in.; height from floor to top of table, 37 in.; accommodates round cornering knives with radii from $\frac{1}{8}$ in. to 1 in. by eighths; max. lift, $2\frac{3}{4}$ in.; net weight 225 lbs.; and, size of motor, $\frac{1}{3}$ h.p. with capacitor start ball bearing.

Further information may be obtained by addressing your request to *Printing Equipment Engineer*.



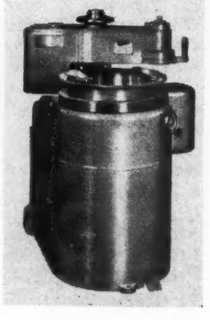
Vandercook & Sons, Inc., announces the 42-28T Power Test Press to check forms in chases for various cylinder presses.

Pre-press Equipment

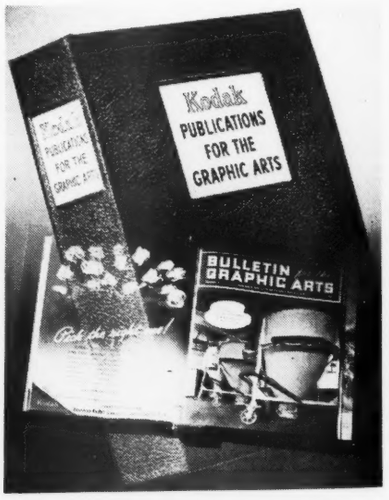
ANNOUNCEMENT has been made by Vandercook & Sons, Inc., of two items of pre-press equipment, the No. 11 Vandercook Block Leveler and the 42-28T Vandercook Power Test Press.

The Test Press is used to check forms in chases for the No. 2 Kelly, Miehle 41, Miller Majors and smaller flat bed presses.

Additional information will be supplied upon request to *Printing Equipment Engineer*.



No. 11 Vandercook Block Leveler for planing mounting material to desired level.



Binder For Kodak Publications—A binder with space for 12 various sized Kodak catalogs and booklets up to 11 in. long, has been announced by the Eastman Kodak Co. Made of heavy board covered with black artificial leather, the binder has embossed yellow panels on the front and side for the title. The title is printed in Kodak red and black. Measurements are 9 in. by 12 in. by 2½ in. Flexible wires accommodate the publications on the inside of the cover. Priced at $2 net, the binder is available through Dept. 8, Eastman Kodak Co., Rochester 4, N. Y.

For Bearing Lubrication

NORMA - HOFFMANN Bearings Corp. has announced a grease for ball and roller bearing lubrication called Norma G-66. Manufacturer claims the grease is highly resistant to oxidation in both service and storage, is insoluble

Norma G-66 Grease for lubricating grease-packed and unsealed bearings, manufactured by Norma-Hoffman Bearings Corp.

in water and will not emulsify or aerate in the presence of condensed moisture. Each batch of grease is laboratory controlled. Available in both tube and container. A bulletin describing the grease in detail is available through *Printing Equipment Engineer*.

Six-color Offset Press

WHAT is claimed to be the first six-color, sheet-fed, paper offset lithograph press ever built was exhibited recently by R. Hoe & Co., Inc., to a group of prominent lithographers. Weighing almost 200 thousand lbs., the press is designed to take paper sheets up to 50 in. by 72 in. Sponsor states the press has an operating speed of 6000 sheets per hour to accurate register on papers suitable for high speed. Two sheet detectors are employed to catch half sheets and prevent the narrow ones from getting into the gripper bars of the press.

Side frames of the press are of one-piece, symmetrical design, semi-steel castings. Lower portion of the frames are over 5 ft. wide. The cylinder journals are of an unusually large diameter.

A Hoe infeed and registering mechanism is incorporated in an auxiliary unit. This is located between the automatic sheet separator and the first printing unit. Its purpose is to convey the sheet, without stopping it for any reason, from the feeder to the traveling gripper bars, front and side, registering it accurately with all sheets treated alike.

On either end of every plate cylinder is an electric motor wired to a control box on the outside of the delivery frame of the press. These controls enable the pressman to swing any cylinder forward or backward and move it to the right or left while the press is running, or standing still, in order to bring any particular color plate into register. The motors for these controls are inactive when the press is running on production.

Mounting Base for Engravings

GENERAL Plate Makers Supply Co. announces development of a new base for mounting photoengravings. It is called Sta-Rite Mounting Base and is designed to be used in place of wood. At the moment, it is available for mounting 16 ga. engravings. It is furnished in sizes 12 in. by 30 in. and 15 in. by 30 in., although other sizes will be supplied in case lots consisting of 10 "sheets" to the case.

The Base is compounded from hardwood chips and phenol formaldehyde, the latter of which is used as a thermosetting binder. It is fabricated under heat and pressure and its stability is said to be excellent.

Plates may be fastened to the base either by standard tacking procedure or by cementing by the flush-mounting methods now in use. It is said that the nail-holding qualities of Sta-Rite Base are equally as good as the standard wood base, and the tacking qualities are as good as the wood lumber product.

Sponsor states special cutting tools are not required to saw and trim the base, but it is recommended that the regular tools now in use be kept sharp and in first class condition.

Liability of warpage of Sta-Rite Base is said to be comparable to end grain wood block. It is claimed that under comparable use and storage, Sta-Rite Base will warp 50% less than straight-grain wood block. Re-use is equivalent to that of wood block provided the previous nail holes are not re-used for tacking a new plate on the base from which a nailed plate has been removed, or if the block is smaller in area when re-used.

It is claimed by some authorities that wood mounting base collapses under about 4 T. pressure. Sponsor states that in tests the Sta-Rite Base decreased in height approx. 1/32 in. under 6 T. pressure.

One of the first questions to be asked by the photo-engraver and the user, whenever a substitute base has been announced in the past has been: How does the price compare with regular wood blocking lumber? General Plate Makers Supply Co. states the price of Sta-Rite Base in some areas is less and in other areas it is not more than wood block.

Portable Voltage Regulator

DESIGNED for use by photographers, photoengravers, and lithographers is a portable device recently announced by The Superior Electric Co. for keeping electric current uniform. Operation of the unit is based upon the action of an electronic control activating an electric transformer. Known as Stabiline, manufacturer claims the unit's action corrects current variations in a fraction of a second. Use of the device in photographic darkrooms, states the sponsor, is helpful in maintaining even current in lighting systems and printing equipment. *Printing Equipment Engineer* will furnish additional information upon request.

Six-color, sheet-fed, paper offset lithograph press recently exhibited by R. Hoe & Co., Inc. Accommodating sheets up to 50 in. by 72 in., the press has operating speeds up to 6000 sheets per hour.

All sheets are entirely printed on the last unit before being transferred to the delivery bars. Delivery platform lowers automatically according to the thickness of the stock. The press stands 8 ft. high, runs 60 ft. in length, and measures 14 ft.

The first press of this series will be shipped soon to Grinnell Lithographic Co.'s new plant at Islip, N. Y.

Additional information may be obtained by addressing your request to *Printing Equipment Engineer*.

Conference Dates *(with organization names and principal officers)*

American Photoengravers Association — 1949 Convention and Exhibition, Fairmont Hotel, Nob Hill, San Francisco, September 12, 13, 14. Frank J. Schreiber, Commissioner, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference—Palmer House, Chicago, Monday, Tuesday and Wednesday, June 6, 7 and 8, 1949. Chairman of the Committee, Edwin H. Evers, Production Manager, St. Louis *Globe-Democrat*. Acting Manager ANPA Mechanical Dept., Vernon R. Spitaleri, 370 Lexington Ave., New York 17, N. Y.

Fifth District Craftsmen's Conference—Hotel Biltmore, Dayton, O., June 17 and 18. Ollie G. Fricke, Fifth District Representative, 43 West Apple St., Dayton, O.; Secretary-Treasurer, John Fisher, Superintendent, Reardon-Parshall Co., 466 Larned St., N. W., Detroit, Mich.

Great Lakes Newspaper Mechanical Conference—Hotel Schroeder, Milwaukee, January 15, 16, 17, 1950. President W. R. Coddington, Composing Room Supt., Youngstown (O.) *Vindicator;* Secretary Al. P. Oberg, Flint (Mich.) *Journal;* Arrangement Chairman J. E. McMullen, Pressroom Supt., Milwaukee *Journal;* Chairman Mfrs. and Suppliers Committee, George Morrison, Morrison Co., 125 W. Melvina St., Milwaukee 12, Wis.

Illinois Newspaper Mechanical Conference—1949 conference to be held in Danville, Ill., dates to be announced later. President, John Orlebeke, Danville (Ill.) *Commercial-News;* Secretary-Treasurer, Wilbur Augspurger, Peoria (Ill.) Newspapers, Inc.

International Association of Printing House Craftsmen—1949 Convention to be held in San Francisco, Palace Hotel, September 4, 5, 6, 7, 1949. President, Gradie Oakes, Process Color Plate Co., 522 So. Clinton St., Chicago 7. Executive Secretary, Pearl E. Oldt, 18 E. Fourth St., Cincinnati 2, Ohio.

International Typographic Composition Association—1949 Convention to be held at Hotel Statler, Boston, Mass., September 22, 23 and 24. Frederick H. Lutz, President, Brockton, Mass.; Frank M. Sherman, Executive Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference— 1949 Conference, Hotel Hanford, Mason City, Ia., May 14, 15 and 16. President, Ken I. Waughtel, Kayenay Engraving Co., Mason City, Ia.; Secretary, Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Kansas Newspaper Mechanical Conference — 1949 meeting to be held at Hotel Kansan, Topeka, Kan., October 1 and 2. President Vern Williams, Mechanical Supt., Topeka Newspaper Printing Co., Topeka, Kan.

Lithographers National Association — 1949 Convention to be held at Mission Inn, Riverside, Calif., May 10 to May 13. W. Floyd Maxwell, Executive Director, 420 Lexington Ave., New York 17, N. Y.

Missouri Newspaper Mechanical Conference — 1949 Conference, Hotel Conner, Joplin, Mo., September 10 and 11. President, Paul S. Ginn, Press Foreman, Sedalia (Mo.) *Democrat-Capital;* Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index;* Chairman of Supply Men's Committee, Robert Robinson, Representative, Certified Dry Mat Corp., 9 Rockefeller Plaza, New York 20, N. Y.

National Association of Litho Clubs — Secretary, William J. Stevens, 317 West 45th St., New York 19, N. Y.

National Association of Photo Lithographers — 1949 convention will be held at Hotel Statler, New York, N. Y., October 19, 20, 21 and 22. Executive Vice President, Walter E. Soderstrom. 317 West 45th St., New York 19, N. Y.; Executive Secretary, William J. Stevens, 317 West 45th St., New York 19, N. Y.

National Graphic Arts Education Association — 24th Annual Conference on Printing Education, Pressmen's Home, Tenn., June 20-23, 1949. John G. Henderson, President; Fred J. Hartman, Educational Director, 719 Fifteenth St., N. W., Washington 5, D. C.

National Graphic Arts Exposition—International Amphitheatre, Chicago, September 11 to September 23, 1950. Headquarters for National Graphic Arts Exposition, Inc., at Room 802, 105 W. Monroe St., Chicago. President, A. E. Giegengack; Secretary, S. Frank Beatty, Graphic Arts Assoc. of Illinois, Chicago. During the period, September 11 to September 23, 1950, a number of Graphic Arts associations will hold their annual conventions as follows: Intl. Assoc. of Printing House Craftsmen, Hotel Stevens, Sept. 10, 11, 12 and 13, 1950; Intl. Typographic Composition Assoc., Sheraton Hotel, Sept. 14, 15 and 16; Printing Industry of America, Palmer House, Sept. 17, 18, 19 and 20, 1950; National Graphic Arts Education Assoc., Hotel Sherman, Sept. 21, 22 and 23, 1950.

National Printing Equipment Association, Inc. — President, R. Verne Mitchell, Harris-Seybold Co., 4510 E. 71st St., Cleveland 5, O. James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — 1949 Conference, Hotel Statler, Boston, Mass., October 29 and 30. President, George F. Marshall, Mechanical Supt., Portland (Me.) *Press-Herald-Express*. Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

Northwest Mechanical Conference — 1950 Conference, Hotel St. Paul, St. Paul, Minn. Tentative dates, March 10, 11, 12. President, Joseph J. Cory, Chief Composing Room Machinist, St. Paul (Minn.) *Dispatch* and *Pioneer Press*. Secretary-Treasurer, Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conference — Roosevelt Hotel, Hollywood, Calif., May 20, 21, 22, 1949. President, Harold Winn, Hollywood *Citizen-News;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News*.

Pacific Society of Printing House Craftsmen — Annual conference in connection with International convention at San Francisco. Society session scheduled for Palace Hotel, Sunday, September 4, 1949. Secretary-Treasurer, R. W. Hardy, 71 Columbia St., Seattle 4, Wash.

PNPA-NJPA Joint Mechanical Conference — Date and place of 1950 Conference to be announced later. Conference director, Theodore A. Serrill, PNPA Associate Manager, Telegraph Bldg., Harrisburg, Pa.

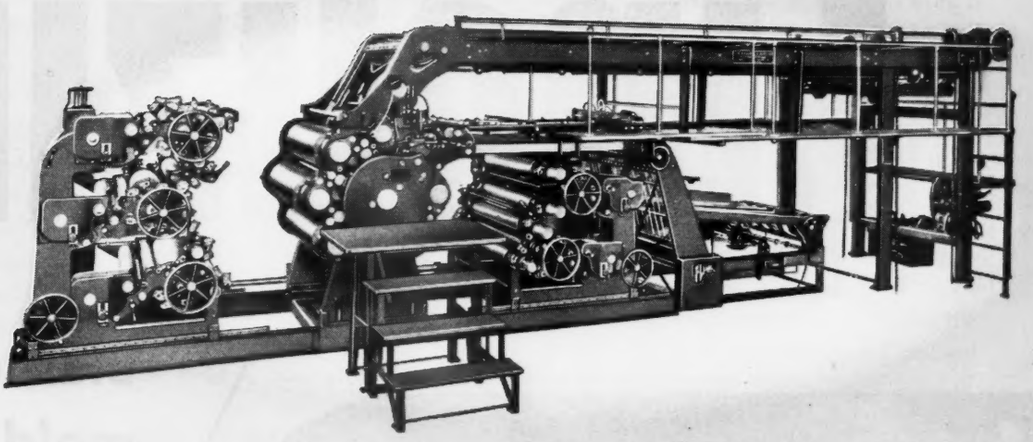
Printing Industry of America — Hotel Biltmore, Los Angeles, November 14-17, 1949. James R. Brackett, General Manager, 719 Fifteenth St. N. W., Washington, D. C.

SNPA (Eastern Div.) Mechanical Conference — Atlanta Biltmore Hotel, Atlanta, Ga., August 29 and 30, 1949. Chairman, Luther Wright, Mechanical Supt., New Orleans (La.) *Item;* Secretary, Tom Tanner, c-o SNPA, P.O. Box 1569, Chattanooga 1, Tenn.; Chairman of Supply and Equipment Group, Owen W. Asbell, Ludlow Typograph Co., representative in Atlanta, Ga.

SNPA (Western Div.) Mechanical Conference—Chairman, George N. Guthrie, Pressroom Supt., Little Rock (Ark.) *Gazette;* Secretary, C. W. Tabb, 723 Texas Bank Bldg., Dallas, Tex. 1950 Conference dates and meeting place to be determined later by Executive Committee.

Technical Association of the Lithographic Industry—(TALI)—1950 meeting scheduled for second week in April, Rochester, N. Y. President, Michael H. Bruno, Lithographic Technical Foundation, Glessner House, 1800 So. Prairie Ave., Chicago 16, Ill. Secretary-Treasurer, Geo. W. Wilhelm, 814 N. East Ave., Oak Park, Ill.

COLOR PRINTING AT ITS FINEST!



At speeds of up to 5500 sheets per hour, this 36 x 48" Cottrell Five-color, sheet-fed rotary press is putting printers in position to cash in on today's increasing demand for more and finer color printing.

Owners of these Cottrell Multi-color units report outstanding performance, unusually high net production and excellent color quality.

These owners are realizing handsomely on their investment in this modern color printing. Why not investigate and learn what such an investment could yield in plant dividends for *you?*

Get into touch with Cottrell — *now!*

Cottrell

C. B. COTTRELL & SONS CO.

Westerly, R. I.

New York: 25 E. 26th St. • Claybourn Division: 3713 N. Humboldt Ave., Milwaukee, Wis.

Chicago: Daily News Bldg., 400 W. Madison St.

Smyth-Horne, Ltd., 13 Bedford Row, London W.C. 1, Eng.

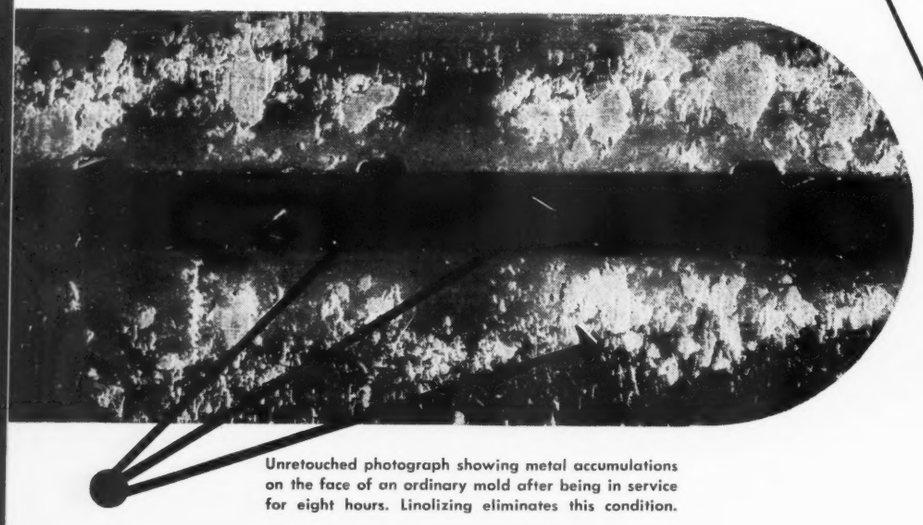
The Amazing Discovery...

Linolizing*

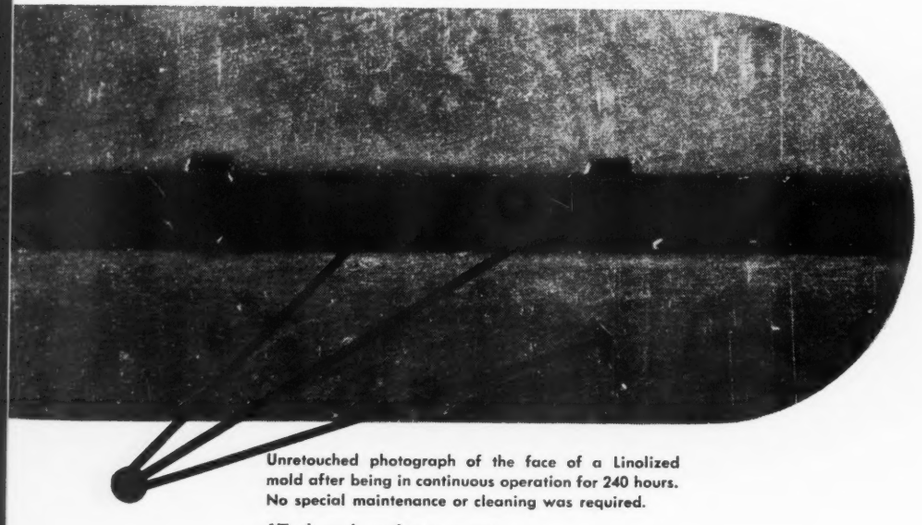
Slashes mold maintenance

Cuts mold damage

Makes smoother ejection



Unretouched photograph showing metal accumulations on the face of an ordinary mold after being in service for eight hours. Linolizing eliminates this condition.



Unretouched photograph of the face of a Linolized mold after being in continuous operation for 240 hours. No special maintenance or cleaning was required.

*Trade mark—surface treatment

LINOTYPE LINOTYPE LINOTYPE LINOTYPE LINOTYPE LINOTYPE

HOW LINOLIZING IMPROVES PARTS ...Linolizing is a special process for coating metals with a hard, dense alloy. The hard alloy is vaporized in a vacuum at extremely high temperatures. A sputtering technique, similar to that used in coating optics, deposits the alloy on the base metal. The alloy then becomes an integral part of the base metal, producing a surface hardness 20% greater than that of high-speed steel. Type metal will not adhere or become fused to the hard, lustrous, glass-smooth Linolized surfaces.

SLASHES MOLD MAINTENANCE...All surfaces of the new Linotype molds with which molten type metal comes in contact are Linolized. Therefore, no special cleaning is required even after months of continuous operation. An occasional wiping with a soft cloth is the only maintenance normally required.

PREVENT MOLD DAMAGE...The use of abrasives or sharp tools to remove metal deposits is no longer necessary. The danger of marring or damaging mold while removing fused metal deposits is eliminated. Linolizing lengthens mold life and eliminates the greatest cause of mold trouble and maintenance expense.

LINOLIZED MOLDS ASSURE EASY EJECTION...Linolized molds remove one of the largest causes of hard ejection. Linolized molds prevent metal adherence to the casting surfaces and permit slugs to be ejected with a smooth, easy push. Strain on ejector parts, noise and battered slugs caused by slugs sticking to the molds are avoided. Machine tie-ups due to hard ejection are eliminated, thereby saving hours of productive time.

CUTS MATRIX DAMAGE...Metal does not stick to the molds causing the face of the matrix to become impregnated with type metal. Furthermore, the bridges between characters on two-letter matrices do not become rounded or damaged by being forced against a mold which contains irregular deposits of metal. Matrices are pressed firmly against a clean mold during casting.

IMPROVES QUALITY OF SLUGS...Because molds do not require any special cleaning, mold edges stay sharp and clean. This prevents fins at the bottom of the slugs when lines are ejected from a mold whose edges have become rounded through excessive cleaning or improper mold care. Because metal does not build up on the face of the mold, matrices hug the molds tightly when lines are being cast. Matrices cannot be held away from the mold by metal accumulations.

NEW LINOLIZED MOLDS WITHOUT EXTRA COST...Linolized molds for your present machines are now available at the regular mold price. This means you receive FREE all the advantages of Linolized molds. Linolized molds are available only from Mergenthaler Linotype Company. On all new molds you now order, you save $20 or $25 because the Linolizing is included at no increase in mold cost.

LINOLIZE YOUR PRESENT MOLDS... All Linotype molds in good condition can be Linolized. Molds which are scratched, nicked, or whose edges are not clean and sharp must be repaired before they can be Linolized. The cost of repair work depends upon the mold condition and will be billed separately. If your present molds require extensive repair work, it may pay you to purchase new Linolized molds. Linotype Universal Adjustable and Advertising Figure molds (not recessed) will be Linolized for $20; recessed and display Linotype molds $25. If no repair work is needed, return shipment of Linolized molds will be made within ten days. Send molds with your order to Receiving Department, Mergenthaler Linotype Company, 23 Hall Street, Brooklyn 5, N. Y.

LINOLIZED SPACEBANDS ALSO AVAILABLE...Linolized spacebands prevent crushing of matrix side walls caused by metal adhesion to casting surfaces of the spacebands. Clean, metal-free Linolized spacebands assure perfect justification of the line during casting. New Linolized spacebands are available for only $1.65 each complete. Wedges can be reconditioned by Mergenthaler and new Linolized slides installed for $1.20 each. Slides alone are $1.00 each if you care to install them on your present wedges.

LINOLIZING FREE ON ALL NEW MACHINES...Linolized molds and a complete set of Linolized spacebands are now standard equipment at NO EXTRA COST on all new Linotype machines. This is being done as an added service to owners and users of Linotype machines.

SEND FOR *FREE* BROCHURE

Clip coupon and mail today. Contains illustrations and complete information about the Linolizing process.

Set in Linotype Garamond No. 3, Erbar and Spartan

MERGENTHALER LINOTYPE COMPANY
29 Ryerson Street, Brooklyn 5, N. Y.

LINOTYPE T.M.

LEADERSHIP THROUGH RESEARCH

Offices and representatives: Boston, Chicago, Los Angeles, New Orleans, New York City, San Francisco; Canadian Linotype, Limited, Toronto

LINOTYPE LINOTYPE LINOTYPE

Mergenthaler Linotype Company, Dept PEE-59
29 Ryerson Street, Brooklyn 5, New York

Gentlemen:

Please rush my copy of the new 12-page brochure on Linolizing.

NAME.....

COMPANY.....

POSITION.....

ADDRESS.....

CITY.....ZONE.....STATE.....

Newspaper Makeup Cabinet

S. K. TRUNNELL, Head of Composing Room, Roanoke (Va.) *Times* and *World-News*, some time ago designed what might be termed a newspaper makeup cabinet. The cabinet is designed to carry all of the spacing and ad-separating materials needed in making up newspaper pages, in addition to 17 inclined shelves for temporarily holding editorial and display matter on galleys, from 3 col. to single column width. This cabinet is rolled into the page truck line in the composing room of the *Times* and *World-News*. The cabinet is designed to service six page-makeup trucks. Mr. Trunnell states the makeup man need not move more than 4 ft. in either direction to secure type or material when making up pages.

The cabinet is made of sheet steel with reinforced frame. It is mounted on four roller-bearing Formica casters with double ball-bearing swivels which have the same weight-sustaining capacity as steel casters.

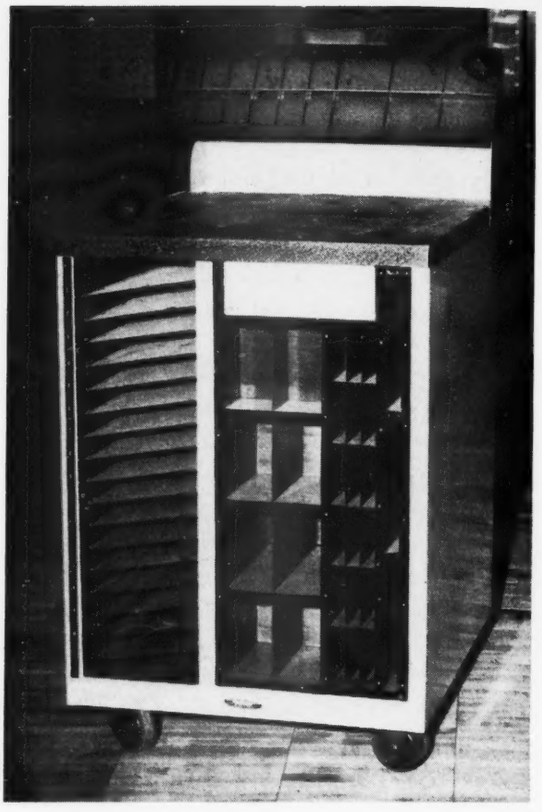
In addition to the galley compartment shelves holding 51 cols. of type, the lower part of the cabinet is partitioned to hold material as follows:

1 to 4 col. low base
1 to 4 col. high base
1 to 8 col. leads, slugs and cutoff rules
120 lbs. full length col. rule.

The overhead inclined steel rack provides storage space for 1 and 2 col. leads, slugs, cutoff rules and dashes.

The sheet steel worktop is used to lay new type upon for the moment.

A rather nice drawer underneath the work top provides a place where the makeup man can keep apron, line gauge, makeup rule, tweezers and perhaps a hand slug clipper.



Time-saver newspaper makeup cabinet is set into truck line at Roanoke (Va.) *Times* and *World-News*. Has sufficient capacity to service six page trucks. Cabinet was designed by S. K. Trunnell.

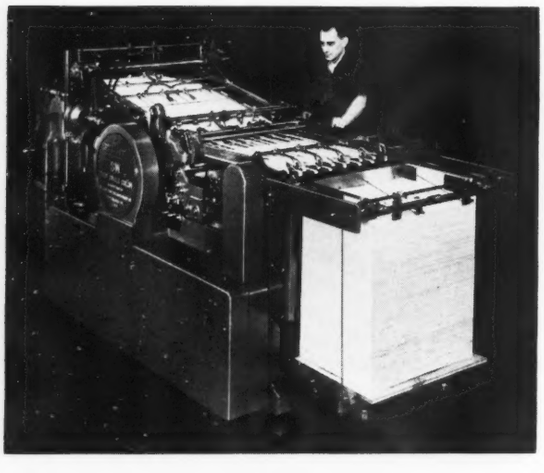
The cabinets are 25 in. wide by 28 in. deep (same as depth of page-makeup trucks) by 37¾ in. high (which is truck and cabinet height in this plant).

At the rear of the cabinet, a hopper is provided, into which the makeup man throws waste slugs and discarded material. When the shift is finished the porter pushes a small metal cart underneath the hoppers, opens the gate and collects waste metal from all of the cabinets for the remelting furnace.

These cabinets give all the supply facilities of the makeup table system and all the flexibility of a turtle makeup system.

Single Color Press

ANNOUNCEMENT has been made by the Miller Printing Machinery Co. of the Miller 21 in. by 28 in. SW Single Color Automatic Cylinder Letterpress Press. Sponsor states the press is the same in design and relatively heavier in construction as the Miller 27 in. by 41 in. SV Single Color press. Maximum sheet size is 21 in. by 28 in., with a minimum sheet of 8½ in. by 11 in. Maximum size form on bed is 20¼ in. by 28 in. Maximum size form in chase is 19¼ in. by 26 in. Stock handled is 0.0025 in. to 0.015 in. Overall dimensions of the press are 7 ft., 6½ in. by 13 ft., 9½ in. Speed range is 2750 i.p.h. to 5000 i.p.h. Further information may be obtained through *Printing Equipment Engineer*.



The Miller 21 in. by 28 in. SW Single Color Automatic Letterpress Press announced by Miller Printing Machinery Co.

New England Meeting

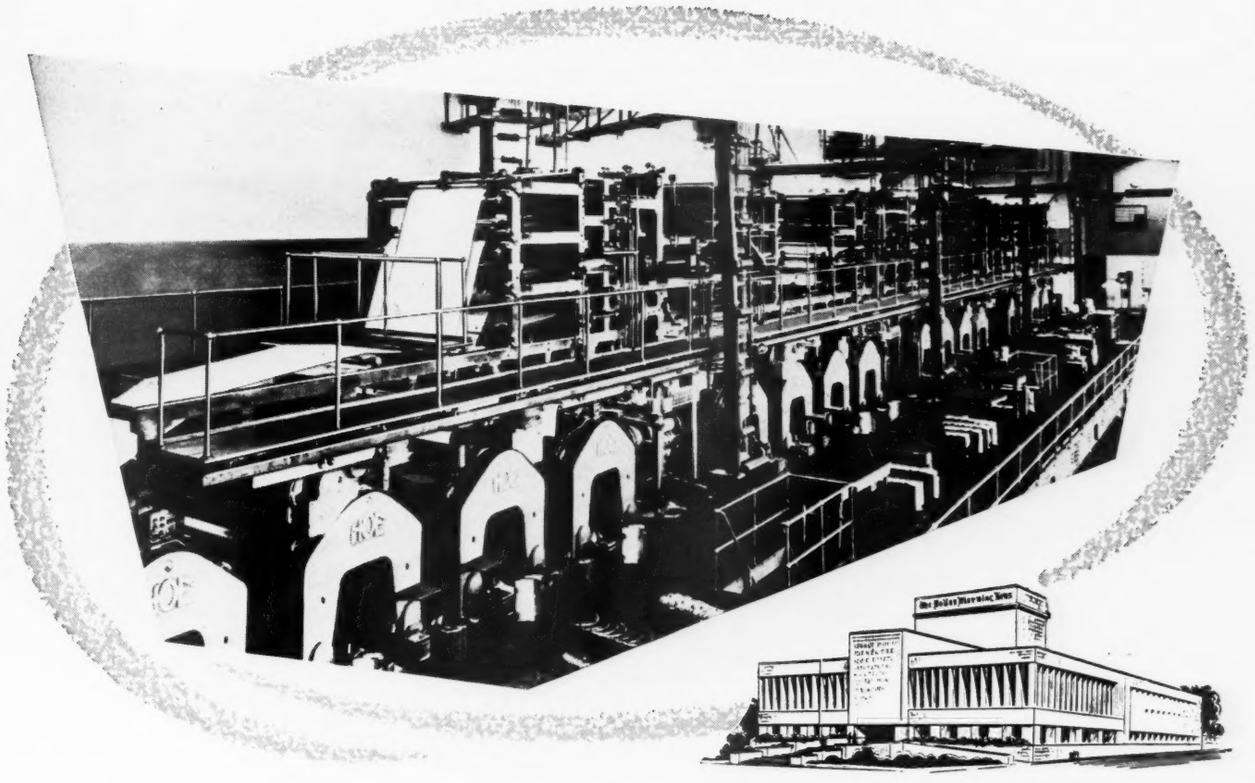
The first meeting of the Directory of the New England Newspaper Mechanical Conference was held recently in the Statler Hotel, Boston, Mass. George F. Marshall, President of the Conference and Mechanical Supt., Portland (Me.) *Press-Herald-Express*, presided. Committees were named and Howard Simons, Eastern Color Printing Co., Waterbury, Conn., was chosen as Program Chairman. The 1949 Conference is to be held at the Statler Hotel in Boston, October 29 and 30.

Graphic Research, Inc.

A new research group, sponsored by Vandercook & Sons, Inc., will function under the name of Graphic Research, Inc., 900 N. Kilpatrick Ave., Chicago. According to the announcement received, Graphic Research, Inc. will devote its efforts to helping printers reduce the cost of printing by obtaining greater volume from their production presses and cutting down the millions of dollars spent annually on makeready. Graphic Research, Inc. will be headed by O. F. Duensing.

The Dallas Morning News

is printed on a New HOE Color-Convertible Newspaper Press



FOR pressroom equipment in its beautiful, modern plant, The Dallas Morning News has selected a new Hoe Color-Convertible Press consisting of sixteen units, four double folders, and facilities to produce full R.O.P. color on any page.

Hoe reels, with automatic running-belt tension, give all webs the constant, uniform tension so essential for color work, and full-speed web-splicing mechanisms insure maximum production.

The Dallas Morning News is one of sixteen outstanding newspapers that have installed new Hoe Color-Convertible Newspaper Presses and many more of these presses are under manufacture and on order.

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO

HOW TO ADJUST
WORK-UPS
By Wm. H. Lichter and Geo. F. Smalley
This 24-page booklet analyzes causes of work-ups and gives proper procedure for locking up forms.
PRICE $1.00 CASH WITH ORDER
PRINTING EQUIPMENT *Engineer*
1276 West Third Street, Cleveland 13, Ohio

Mechanism of the Linotype . . .
By John S. Thompson
Revised and amplified by Oscar R. Abel and Windsor A. Straw
A practical treatise on the care and operation of the Linotype. Many illustrations. Size, 4½ in. by 6¾ in., 238 pages.
$5.15 postpaid
Cash with order
PRINTING EQUIPMENT Engineer
1276 West Third St. Cleveland 13, Ohio

Atom May Help Lithography

Dr. Paul J. Hartsuch, Supervisor of the Metals and Surface Chemistry Div. of the Lithographic Technical Foundation's Research Dept., is in Oak Ridge, Tenn., studying the techniques of using radioisotopes in lithographic research. Dr. Hartsuch is among 32 scientists from the United States and several foreign countries enrolled at the Oak Ridge Institute of Nuclear Studies.

Dr. Paul J. Hartsuch, LTF scientist, studying possible use of atoms in litho research.

Radioisotopes are atoms which give off radiation and thus enable scientists, using a Geiger Counter, to trade them through complicated chemical and biological processes. As a result, radioisotopes have been called the most important research tool to be developed since the invention of the microscope.

As only those who have attempted scientific research in lithography know, the deeper one digs in an attempt to get at fundamentals, the more complicated the process becomes. Questions continually arise which have no answers. For instance, why does the surface of one metal become greasy and another metal water receptive when both are merely treated with phosphoric acid? This is only one of hundreds of such problems.

It is suspected that many reactions take place in the lithographic process that produce films on the surfaces of metal plates that are only a few molecules thick. So infinitely thin are these molecules that it is not possible to detect or measure them with ordinary chemical methods.

Consequently, Dr. Hartsuch is at Oak Ridge to study the possibility and practicability of using radioactive tracers to measure these reactions. The method represents another avenue of approach in LTF's continuing research to develop improved lithographic techniques and materials. As a research tool, the use of radio-active materials opens a wide new field for the Foundation's work.

SAVE COSTS EVERY EDITION!

EASTERN Newspaper Production Supplies are selected with one purpose: **To provide you with economical, dependable, top-quality equipment and supplies!** These carefully tested products are sure to speed every phase of your production . . . Pressrooms, composing rooms, stereotype and engraving departments.

PLATE-TAK **(SUPER THIN** CUT MOUNTING TAPE) • FLECTO GUMMED BACKING FELT • TRU-MOLD CORK MOLDING BLANKET • ROYLE ROUTING CUTTERS • EASTERN CIRCULAR SAWS IN ALL SIZES • EASTERN ROUTER BELTS IN ALL SIZES • DIRECT PRESSURE MOLDING MATERIALS • CURVED AND FLAT CASTING BOARD • COMPOSING ROOM AND STEREOTYPE EQUIPMENT • STEREOTYPE HAND MITTS • THE NEW DICK MAILER . . . **and many other standard aids to efficient production.**

Representatives for:

AMERICAN STEEL CHASE COMPANY (Newspaper Chases; Make-Up Trucks)
STA-HI CORPORATION (Master Former; Premier Shaver; Power Form Lift; Vacuum Casting Box)
H. B. ROUSE COMPANY (Accessories and Equipment)
CHALLENGE MACHINERY COMPANY (Composing Room Equipment)

PLACE YOUR ORDER NOW! If you do not have your copy of this catalog, or want an additional copy, we'll mail you one on request.

EASTERN FOR ECONOMY

EASTERN NEWSPAPER SUPPLY, INC.
9603 Northern Boulevard, Corona, L. I., New York

Miller Simplex Booklet

MILLER Printing Machinery Co. has published an 8-page booklet on the 20 in. by 26 in. Simplex Automatic Cylinder Press. Printed by letterpress in blue and red on coated stock, the booklet contains both illustrations and diagrams of the press proper and the various units which make it up. The text is descriptive of the operation of the press. Specifications are included. Size of the booklet is 9 in. by 12 in. Copies may be obtained by writing *Printing Equipment Engineer*.

Carnegie Students Visit Chicago

Seniors and graduates of the Department of Printing Administration, Carnegie Institute of Technology, made a tour recently of Chicago printing and engraving firms. Among the establishments visited were the Newman-Rudolph Lithographing Co.; R. R. Donnelley and Sons; Pontiac Engraving and Electrotype; The Inland Press; Miehle Printing Press and Mfg. Co.; Chicago Rotoprint Co.; Ludlow Typograph Co.; Monsen-Chicago, Inc.; and W. B. Conkey Co. The group was accompanied on the trip by Prof. Stanley C. Hlasta, Asst. Department Head.

84-page Week-day Paper

April 7 marked the largest regular week-day issue of the Chicago *Tribune* ever published. An estimated 187 thousand lines of advertising in an 84-page newspaper broke all previous records of week-day advertising volume. The record issue was printed in the largest single press run in the 102-year history of the *Tribune*. Thirteen presses, composed of 74 units, were used in making the run. Each press was equipped with a color deck to print a cartoon on the front page. Earlier record issues, such as a 112-page Thanksgiving Day paper of last year, were published by making two press runs and assembling sections after printing.

Announcing... A NEW EASTERN ROLLER PLANT

THE MORELAND CORPORATION

WILLOW GROVE, PENNSYLVANIA

Manufacturers of

PRINTERS' ROLLERS

for

NEWSPAPERS, LETTERPRESS, OFFSET, ROTOGRAVURE

Made of Synthetic or Natural Rubbers or Vulcanized Oil

THIS Plant is located just outside the city of Philadelphia. It is the largest, most modern, up-to-date, best arranged and equipped factory in the United States for the manufacture of the above types of rollers.

It is owned and operated by, and its products sold through, the following well-known roller makers:

HARRIGAN ROLLER COMPANY, INC.
311 Guilford Avenue
Baltimore 2, Maryland

GODFREY ROLLER COMPANY
211 N. Camac Street
Philadelphia 7, Penna.

SAM'L BINGHAM'S SON MFG. CO.
636 Sherman Street
Chicago 5, Illinois

FRANK A. REPPENHAGEN, INC.
339 Oak Street
Buffalo, New York

NATIONAL ROLLER COMPANY
307 Pearl Street
New York 7, New York

Training Facilities at Southern School

ORGANIZED in 1919 in Nashville, Tenn. as a non-profit institution and chartered under the Welfare Acts of the State of Tenn., the Southern School of Printing has continued to operate for 30 years without interruption. From January, 1948 until January, 1949 the students of the school have actually had 207,552 training hours. At the present time, the enrollment averages 100 students in the five letterpress departments.

The school makes use of projectors (both still and moving) and other visual aids in turning out trained apprentices for the printing industry. Working models in cross-section of machine parts, blown up 27 times and painted in as many colors as possible, help the student's eye distinguish between the various parts of the assembly. Examples of this are a 2 ft. 4 in. composing stick with type 3 in. high with spaces, slugs and rule to match; a keyboard cross section, a magazine escapement verge assembly, and a first elevator jaw, matrix and mold assembly of a line composing machine in cross-section.

Classes are conducted by instructors who have had from 5 to 20 years of practical experience in the printing industry. The curriculum includes English, printers' mathematics, glossary of trade terms, hand composition, and Linotype mechanism. Sound movies are furnished by machinery and paper manufacturers as visual aids in teaching these subjects.

Class room studies consume two-seventh's of the total hours of attendance daily. The remainder of the day is under supervision of instructors on a basis of one instructor to every 12 students. Shop instruction is individualized. The school does not operate with set classes or semesters. Students are entered at any time and graduated when both the student and the instructor feel that he is qualified and eligible to assume a job in the industry.

A series of lessons used in hand composition, Linotype, Intertype and Monotype, are based on rules followed in the printing field. These cover indentions, initials, caps and small caps, tabular work, telephone directories, display composition, setting around cuts and Roman numerals.

The Southern School of Printing has redoubled its efforts in the post-war years to place trained apprentices in the Graphic Arts. Three overlapping shifts are operating from 7 a.m. until midnight. During the period of January 1, 1946 to January 1, 1949 100 percent of the school's graduates have been placed in the active printing field.

At present the school is endeavoring to raise $60 thousand to finance the addition of 4500 sq. ft. of floor space for expansion of the letterpress training facilities and to incorporate offset-lithography as a training course.

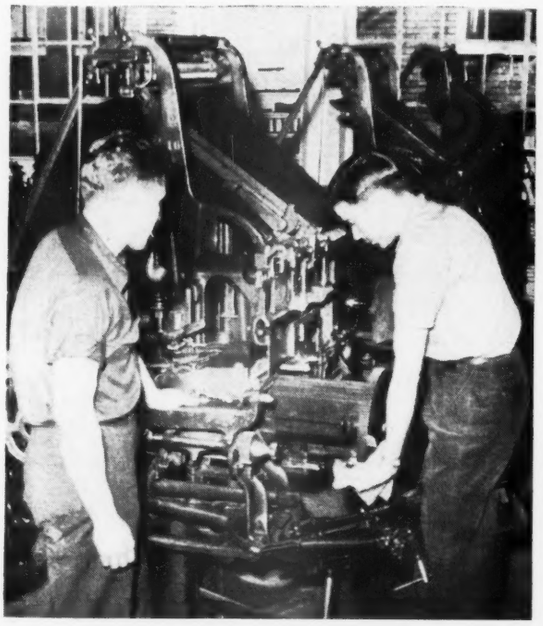
The product of the school is a trained apprentice. No commercial work of any kind is done and all practice work is assigned to the waste paper drums.

The school's monthly tabloid *The Blab Slab* has a circulation of approx. 3000 in the South among printers, publishers, lithographers, and former students.

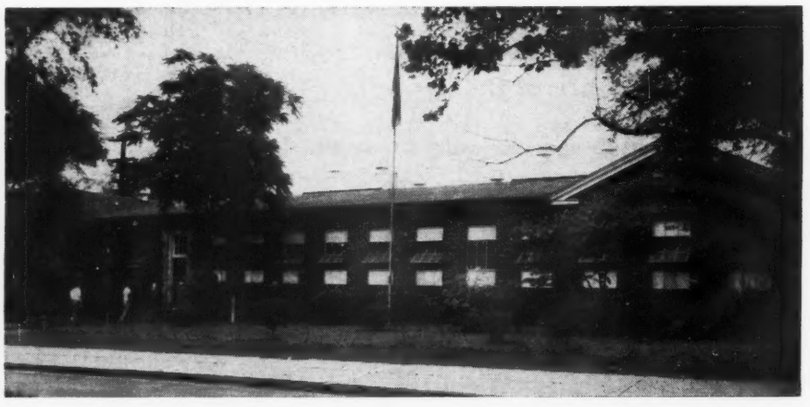
Nearly every state in the South is representative of the localities from which the majority of the students come. In the past, enrollers have come from a number of Northern states, as well as Hawaii, Canada, Cuba and Mexico, to attend the school.

Five courses are offered extending from 6 to 18 months in length. These include Hand Composition, Presswork, Linotype and Intertype Operation and Maintenance, Monotype Keyboard and Casting, or a combination of Linotype, Intertype and Monotype.

Supporters of the school include master printers, machinery and supply manufacturers and southern publishers. At present, the apprentice school is operating in its own modern building which contains approx. 8000 sq. ft. of floor space. Modern machinery is employed.



Student at Southern School of Printing removing mold slide from a line composing machine under supervision of an instructor.



Southern School of Printing in Nashville, Tenn., where students last year put in over 200 thousand training hours. Product of the school is to turn out trained apprentices for the printing industry. This building occupies 8000 sq. ft. of floor space to accommodate the modern printing machinery used by the school.

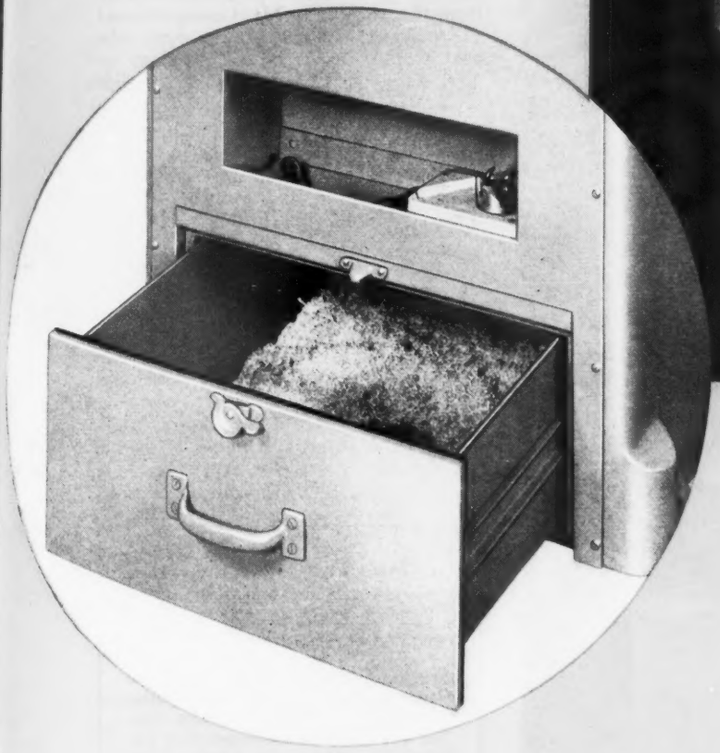
Average Offset Plant Has Only Ten Employees

(Abstracted from Address, *LTF Moves Ahead*, by Don H. Black at the National Association of Photo-Lithographers Convention, Cincinnati, September 1948)

THE lithographic industry (not unlike other branches of the graphic arts) is made up of 3,000 units or plants owning lithographic equipment. And yet, the average number of lithographic employees per plant is only ten men. Obviously units of this size cannot do a great deal of private fundamental research or employee training or even have time for costly trial and error experimentation.

No. 11 VANDERCOOK BLOCK LEVELLER

A new and extra heavy precision tool, that will accurately plane wood, lead alloy, aluminum, magnesium and plastic mounting materials. A descriptive circular giving full details will be mailed upon request.



Standard equipment includes vacuum exhaust system with cyclone separator in base of machine for removing metal and wood shavings into a steel drawer.

6 IMPORTANT FEATURES

- *Planing time, maximum sized block (12"x18"), 7 seconds.*
- *For permanent accuracy, table is supported by ball bearing 14½" in diameter.*
- *Quick acting plate clamps operated by hand wheel, designed to (1) correct warped mounting material with neutral clamping, then (2) exert a down pull for planing the reverse side.*
- *Depressing foot pedal releases (1) table brake, (2) disengages clamping wheel, (3) starts cutter and table motors.*
- *Cutter head raised or lowered to desired thickness by convenient hand wheel; eye level indicator graduated in .001" shows depth of cut.*
- *Cutters are inexpensive and easy to regrind.*

VANDERCOOK PRE-PRESS SYSTEM —CUTS COSTS!

VANDERCOOK & SONS, INC.

Main Office and Plant:
900 N. Kilpatrick Avenue, Chicago 51, Illinois

Chicago Display Room
630 South Dearborn Street

Eastern Branch
216 East 45th St., New York 17, N.Y.

Western Branch
1151 S. Broadway, Los Angeles 15, Calif.

In Canada ... SEARS LIMITED ... *Montreal, Toronto, Winnipeg, Vancouver*

St. Petersburg Printing Expands

MANY printing plants are expanding their facilities to further the improvement of quality in printed matter and to keep abreast of the increasing trend toward speed and greater volume. The St. Petersburg (Fla.) Printing Co., Inc., has not been caught napping in this program. Recently completed are two additions to the original building to house numerous pieces of equipment that have been installed.

Ben Granger, Vice President and General Manager, operates this modernized plant on the principle that the way to sell printing is by using printing. By applying the printed word in the form of advertising to customers in fields where the company still was comparatively unknown, this company is today doing ten times more business than it did in 1932, its first year of operation.

From its beginning, this Florida concern has aimed for quality and service and has established a reputation for high quality four-color process letterpress printing. Several national awards, which won the firm recognition for quality color work, will attest to this.

Other policies adopted by Granger from the company's inception was to have quality maintained in spite of lack of paper assortments, choices of inks and certain items of equipment. He decided also that no job was to be promised for delivery without that delivery being made as promised, even if the shop had to run night and day to complete it.

Proudest example of the expansion program is a 64-page double-deck Goss rotary press for printing books and magazines. The St. Petersburg Printing Co. claims it is the only commercial shop in the state of Florida and one of the few in the entire South that operates a rotary or web fed press. The new installation is capable of printing and folding 300 thousand pages an hour.

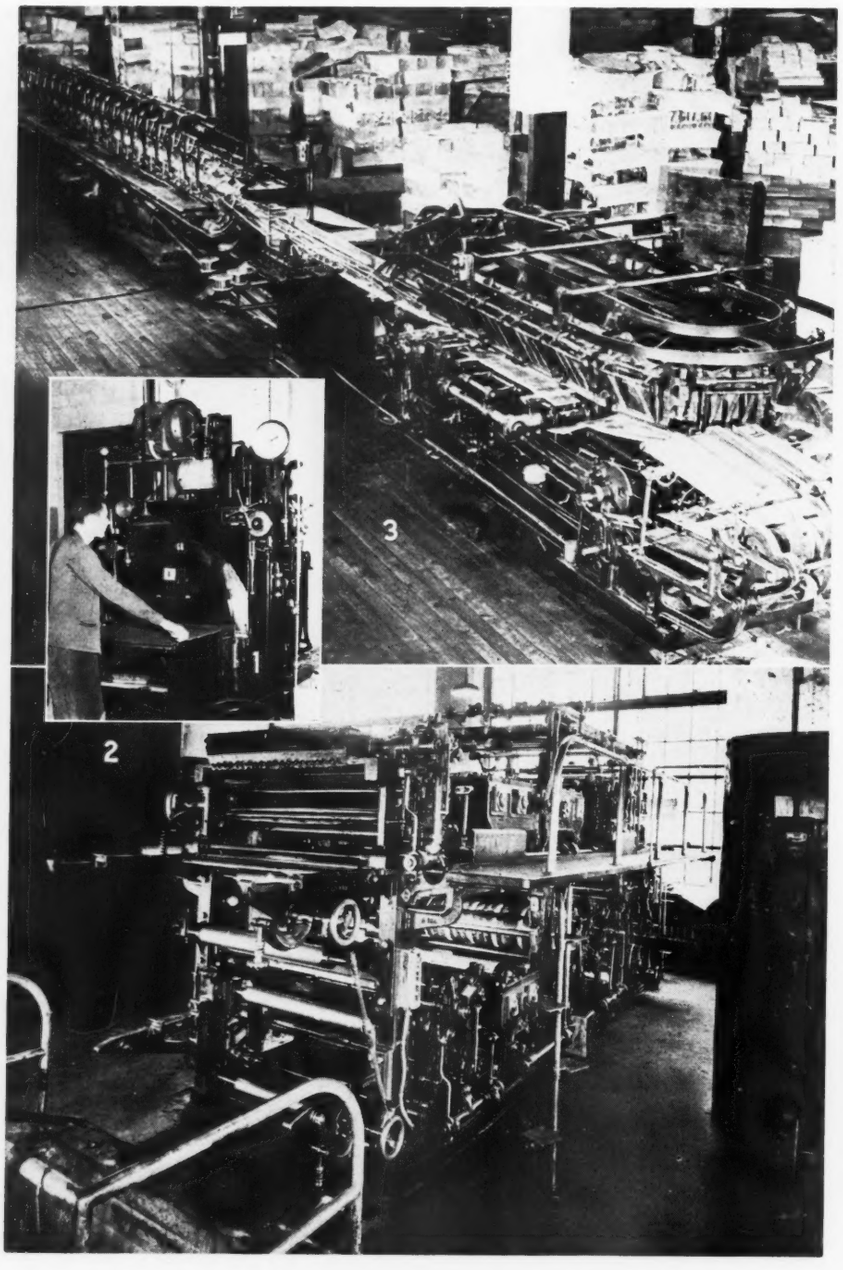
During the current year, a Lake Erie Directomat, capable of producing 800 T. of pressure, was installed. This highly specialized machine, together with a completely equipped stereotype department, enables the plant to handle production at top speed and efficiency.

This forward movement toward a streamlined printing plant has not found the bindery neglected in any respect. A Sheridan Covering and Binding Machine has been purchased for this department and set into operation to cope with the never-ending flow of printed matter from the pressroom. Mr. Granger stated this machine will do in three days, jobs that would have required 30 days by older methods. He said that on this equipment 3000 books an hour can be gathered, bound, stitched and covered in one operation.

The company has an imposing list of customers representing printing buyers in all parts of Florida as well as other sections of the country. This list reaches as far north as Canada and as far south as the Canal Zone.

Floor space of the present plant exceeds 16,000 sq. ft. and employed are over 40 people. The annual payroll is considerably more than $125 thousand.

Other officers of the company besides Mr. Granger are: Dixie M. Hollins, President; Maurice L. Hollins, Secretary and P. F. Thomson, Treasurer.



St. Petersburg, Fla. Plant is Modernized—With the aid of new machinery and two additions built on to the original building, the St. Petersburg Printing Co., Inc., has expanded its facilities to handle the increased demand for printed matter. Shown above is the Lake Erie Directomat (1) which has been added to the stereotype department; a 64-page double-deck Goss rotary web magazine press (2) has been installed in the pressroom, and a Sheridan Covering and Binding Machine (3), latest installation in the bindery.

Time Lost is Amazing

(Abstracted from address by B. F. Garrity, Production Manager, Gannett Newspapers, before PNPA Mechanical Conference, Harrisburg, Pa., April 1949.)

IT is amazing to me to see the amount of time that is lost in the composing room trying to interpret advertising copy. That was all right when wages were low. Today it would be much cheaper if this time was lost in the business office where wages are a great deal lower. It shouldn't be necessary for a $2-an-hour man to try to interpret a piece of ad copy or have to look around the composing room for a magnifying glass to read the copy. No one has more than scratched the surface when it comes to saving time and money by better preparation of advertising copy. There is room for a great deal of improvement.

Patents

For The GRAPHIC ARTS

Covering patents issued February 15, February 22, March 1 and March 8.

Binding, Cutting, Perforation

2,463,769. METHOD OF PRINTING AND BINDING BOOKS. A method of producing and covering signatures, to form a book or magazine in which the grain of the paper runs parallel to binding, uses a rotary printing machine equipped with a jaw folder. A web of paper is printed from plates that are arranged with "columns around" the cylinder, as compared with the "columns across" method. The web is cut into sheets and the sheets are folded crosswise as with a jaw type folder to produce signatures of a selected number of pages. A proper number of such signatures are assembled. This is followed by binding them on two opposite pages, covering the bound signatures and finally cutting apart the doubly bound signatures and trimming them. Invented by Gilbert H. Higgins, Mountain Lakes, N. J. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application February 21, 1945. 6 claims.

Composing Room Equipment

2,464,078. SPACER ELEMENT FOR TYPOGRAPHICAL MACHINES. The spacer element for a photocomposing machine has the marginal outlines of well-known blanks or quads, i.e., of a standard matrix and is expansible edgewise. Spacer comprises outer or side plates of resilient material secured together in parallel relation flatwise to upper and lower separators providing between them and the plates an opening edgewise through the spacer. An adjustable slider having thick and thin portions is shiftable fore and aft in the opening between positions wherein a limited portion thereof projects beyond either the front or the rear edge of side plates. Slide is adjustable by means of a forwardly extending tongue thereon which is contacted by an element of the machine. Side plates can be flexed between a parallel and an outwardly bowed relation to vary thickness of spacer. Invented by Herman R. Freund, Brooklyn, N. Y. Assigned to Intertype Corp., Brooklyn, N. Y. Application June 6, 1947. 11 claims.

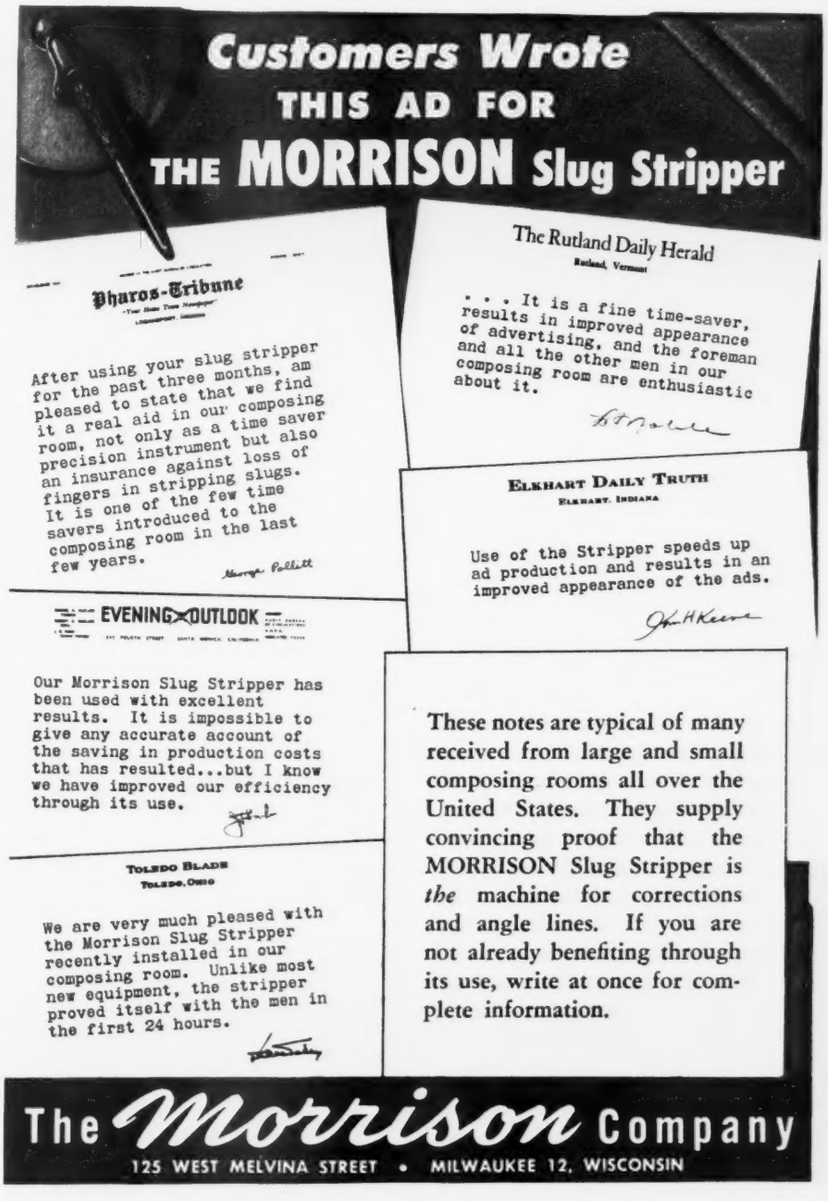
Feeding, Folding, Delivery

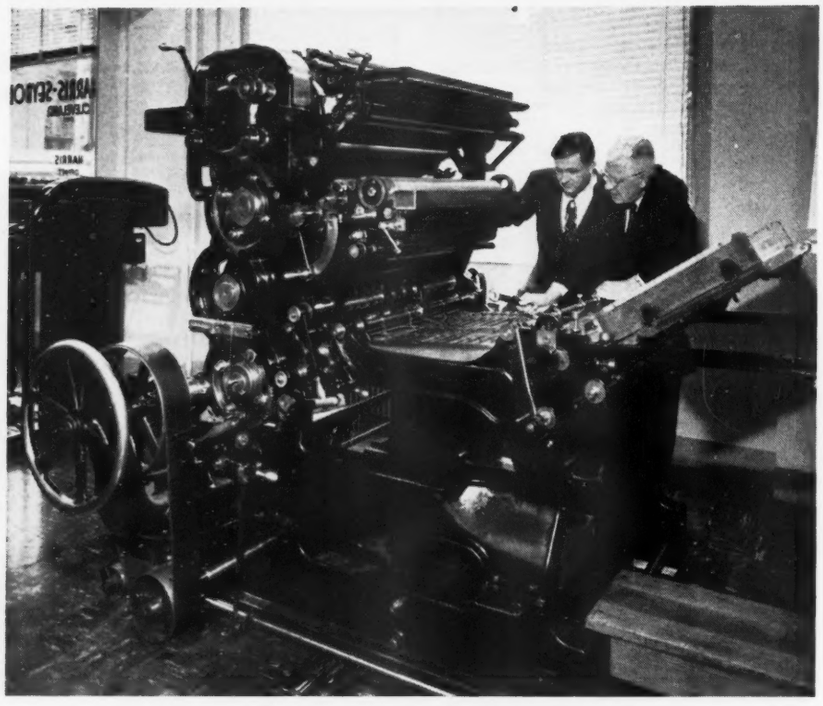
2,461,573. MACHINE FOR STUFFING NEWSPAPERS has a train of conveying V-shaped pockets which are advanced around a horizontal endless orbit. Each pocket receives a first jacket section and then inner sections at predetermined receiving stations along the travel path and discharges the completed assemblage at a delivery station. Pockets stand out radially, carried upon a driven rotor, and each comprises a pair of movable walls, normally open to receive and hold edgewise the jacket section with fold downward. Walls close and reopen with jacket section opened and supported in V-form. Beyond the last of the other receiving stations the V-shaped pocket opens below to discharge the assemblage at delivery station. Pocket then advances to receive another first jacket section. Invented by Paul Schweizer, Easton, Pa. Assigned to T. W. & C. B. Sheridan Co., New York, N. Y. Application April 2, 1945. 23 claims.

2,462,380. APPARATUS FOR DRYING CLOTH OR OTHER WEB MATERIAL is of the type in which the elongated passage in which the material is being dried may be broken up into sections, in zigzag formation. An endless chain apron or material carrier is also in zigzag formation. Means are provided for supporting material between opposed nozzles while it is traveling through a second, fourth, etc. section of drying passage and is located beneath that run of the endless chain carrier located in said second section,

(*Continued on Page 49*)

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.


Customers Wrote
THIS AD FOR
THE MORRISON Slug Stripper
Pharos-Tribune
After using your slug stripper for the past three months, am pleased to state that we find it a real aid in our composing room, not only as a time saver precision instrument but also an insurance against loss of fingers in stripping slugs. It is one of the few time savers introduced to the composing room in the last few years.
The Rutland Daily Herald
Rutland, Vermont
. . . It is a fine time-saver, results in improved appearance of advertising, and the foreman and all the other men in our composing room are enthusiastic about it.
Elkhart Daily Truth
Elkhart, Indiana
Use of the Stripper speeds up ad production and results in an improved appearance of the ads.
EVENING OUTLOOK
Our Morrison Slug Stripper has been used with excellent results. It is impossible to give any accurate account of the saving in production costs that has resulted...but I know we have improved our efficiency through its use.
Toledo Blade
Toledo, Ohio
We are very much pleased with the Morrison Slug Stripper recently installed in our composing room. Unlike most new equipment, the stripper proved itself with the men in the first 24 hours.
These notes are typical of many received from large and small composing rooms all over the United States. They supply convincing proof that the MORRISON Slug Stripper is *the* machine for corrections and angle lines. If you are not already benefiting through its use, write at once for complete information.
The Morrison Company
125 WEST MELVINA STREET • MILWAUKEE 12, WISCONSIN



J. C. Dabney, Harris-Seybold Eastern District Manager, has announced that the first Harris offset press, Model S4L, a 22 in. by 30 in. single color, and its modern counterpart, the new Model 128 (21 in. by 28 in.), are featured in a Graphic Arts equipment exhibit at Eastern District Headquarters, 380 Second Ave., New York, N. Y.

Other new equipment on display, Dabney reported, includes several models of Seybold cutter and drill-slotting equipment, and the 24 in. Sussin Precision Camera.

The first Harris offset press was developed and built in the Niles, O. house where President McKinley was born. The now historic press, first practical commercial model produced by the Harris brothers, was delivered to the Security Banknote Co., Pittsburgh, in July 1906.

Proof Press for Special Purpose

IN THE accompanying illustration is shown a specially designed proof press. It was made for one purpose only—that of printing hurry-up proofs of newspaper pages which an editor might want to scan just before the made-up page forms are sent to the stereotype department.

The editorial department of a newspaper might want proofs of page 1, editorial pages, jump pages, or the society section. Sometimes, according to the equipment available in the composing room, furnishing the proofs as a costly and time-consuming operation.

In the plant of the Houston (Tex.) *Chronicle*, Production Manager Gordon Elrod and Maintenance Chief Harry R. Millinger got their heads together by collaborating on the design of such a press. It was built in the *Chronicle* machine shop at a cost of $50 for materials plus labor.

In the illustration is shown the press which was installed in the makeup department of the *Chronicle*. As will be seen, the makeup man rolls a form truck, upon which a locked-up page rests, up to the apron of the roller rest which is attached to one of the structural columns in the makeup department.

In the accompanying illustration, the makeup man has rolled the truck so that one edge of the truck top abuts the vertical apron of roller rest *5*; the 8 in. diam. impression roll *1* is mounted on a pair of arms *2*, with slotted pivots *3* on bracket *6*. When not in use, impression roll *1* rests upon rest *5* which carries the entire weight of the roll.

After inking the form, the makeup man raises latch *4* which normally holds roll *1* safely in position on rest *5*, and draws the impression roll over the sheet of proof paper on the type form.

The reason for the slots in the upper extremities of arms *2* is apparent. The arms keep the roll traveling in a straight line. The slots in the arms permit free travel of the roll until the bottom of the type page has been reached, the ends of the slots limiting the forward travel of the roll.

The roll can be covered with press blanket cemented to the roll surface or it may be stitched at the joint.

Mr. Elrod states a page proof can be taken in less than 1 min. Newspaper executives interested in building such a press for their own use can secure dimensional drawings by writing to Mr. Elrod.

View of newspaper page proof press in makeup department of Houston (Tex.) *Chronicle*. Proofs of page 1, editorial, jump or society pages can be taken in less than 1 min.

Check Imprinting Press

THE Champlain Co., Inc., has announced an improved model of the Goat Check Imprinting Press. Manufacturer states that the Model C imprints and numbers checks and stubs three-up from one set of composition, with one handling of the sheet, at 115 i.p.m.

In operation, the type form remains stationary and the paper moves and registers between impressions. Sponsor states that parts for the Model C are constructed of stronger and lighter alloys than the previous models. Improvements include lateral registry of paper throughout cycle of operation, finger-tip registry control for all three checks, an over-all time saving chase, and individually supported transport tapes for case of replacement.

The press is powered by a ¾ h.p., 1140 r.p.m. motor and requires 55 in. by 38 in. of floor space. Further information may be obtained by addressing your request to *Printing Equipment Engineer*.

Patents for the Graphic Arts

(Continued from Page 47)

etc. Material is held against underside of carrier in those sections in which it is located below the carrier by unbalanced air pressure, i.e., pressure on underside is greater than that on upper side. Invented by Arthur G. Gautreau, Quincy, Mass. Assigned to Andrews & Goodrich, Inc., Dorchester, Mass. Application January 5, 1946. 3 claims.

2,463,448. ELECTROMAGNETIC VIBRATOR. Paper jogging table is treadle-operated and quickly-vibrates a pile of cards so that they form a smooth edge stack. The base may be a square or rectangular enclosure on which a table or cover is mounted and supported by spaced rubber members or springs for vibration in a vertical rectilinear path. An armature is mounted on the underneath side of the table, at a midpoint between the rubber members. An electromagnetic field is housed within the base and is adapted to oscillate the armature when it is electrically energized. Invented by Carl S. Weyandt, Homer City, Pa. Unassigned. Application August 7, 1945. 9 claims.

2,464,173. CONVEYOR AND GUIDE for sheets of paper and the like comprises one or more rollers mounted for peripheral contact with advancing sheets. Axes of rotation of the rollers are inclined in the direction of advance of the sheets, whereby the sheets are urged laterally against a guide rail as they are advanced. Instead of the usual weight elements imposed upon the sheets to hold them against the rollers invention provides a number of such roller devices for urging the sheets laterally as they are advanced. Each device consists of a roller mounted on an arm above guide rail to rest upon and to be rotated by sheet as latter is advanced by conveyor over the guide rail. Roller is mounted for free downward movement into engagement with sheet and for adjustment to different inclinations relative to conveyor to cause roller device to urge sheet laterally against guide rail as it is rotated. Invented by Albert Broadmeyer, Norwalk, Conn. Unassigned. Application November 2, 1945. 13 claims.

Miscellaneous

2,461,603. PATTERNED, ORNAMENTAL FABRICS in which the design is permanently resistant to washing and cleaning may be produced by the printing process disclosed. The pattern is delineated by lustrous and lusterless areas. The process comprises immersing a fabric having a basis of cellulose acetate material in a solution consisting of 2 parts by weight of a dyestuff for the cellulose acetate material, 68 parts by weight of a lower aliphatic alcohol and 30 parts by weight of water. The wetted material, while in a swollen condition, is subjected to pressure between a pair of unheated rotating cylindrical surfaces. One surface is smooth and the other engraved in the desired pattern. Invented by Robert Lee Hunter and Ralph Denzel Cramer, Cumberland, Md. Assigned to Celanese Corporation of America, New York, N. Y. Application July 14, 1944. 1 claim.

2,461,829. PROCESS FOR MAKING GLUTEN PLASTICS comprises heating to 50° C. and mixing, by weight, 100 parts glycerine, 5 parts concentrated hydrochloric acid and 1 part orthocresol for one hour to form an initial mixture. This is mixed with 300 parts of wet gluten containing 33 percent dry gluten to form a homogenous mass. This is aged at 50° C. Products are adapted for use as medicinal capsules and as plastic moldable or coating materials, e.g., on paper. The proportion of gluten to gelatin may be varied widely for special purposes, such as forming adhesives, printers' rollers and for obtaining material which resists grease and oil. Invented by Leslie Lowen, Wyandotte, Mich. Assigned, by mesne assignments, 9448/-10570 to Chem-protin Products, Trenton, Mich., 561/10570 to Laszlo Kormendi, New York, N. Y., and 561/10570 to B. Clark Boeckeler, Grosse Ile, Mich. Application November 9, 1944. 4 claims.

Plate Making

2,462,151. PHOTOGRAPHIC ELEMENTS HAVING HYDROPHILIC POLYVINYL ACETAL COLLOID SUBLAYERS. Photographic elements of invention have improved anchoring layer. Colorless, hydrophilic macromo-

control

Every step in the manufacture of Burgess Chrome Mats is carefully controlled. Elaborate instrumentation has been developed to insure that rigid standards are met from start to finish.

But Burgess isn't satisfied with mere automatic control. Skilled technicians police Burgess quality by constant and thorough testing throughout production. Thus, the finished product is a mat of superior quality, consistent moisture content, and uniform shrinkage—a mat to satisfy the most particular stereotyper.

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BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

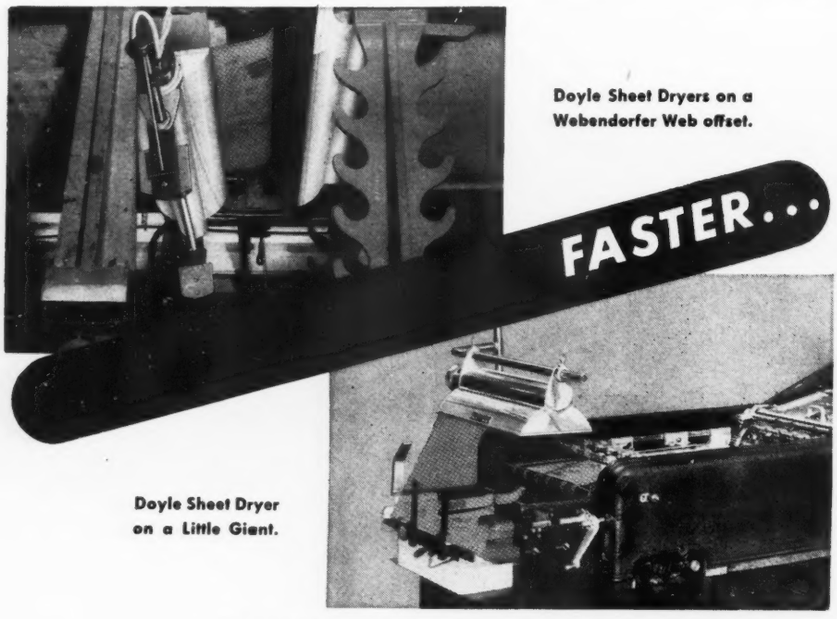
FREEPORT, ILLINOIS

lecular acetals of a vinyl alcohol polymer with an aldehyde containing carboxylic acid and/or sulfonic acid groups and which are also free from color-generating groups are well suited as anchoring materials. Products have wide application in the general field of photography. Films are useful in producing matrices for printing or dye transfers or for use in graphic arts in general. Invented by David W. Woodward, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application September 23, 1946. 9 claims.

2,462,570. METHOD OF FORMING PRINTING PLATES. This invention is a continuation in part of that covered by patent 2,384,857 dated September 18, 1945, in which the film or carrier has one of its surfaces toothed, roughened or grained and carries a layer of light sensitive emulsion which is so thin that highlights remain relatively soft. The present patent provides for applying a wax-like formable material to the plate which is made to conform to its toothed formation by pressure. The wax is removed in sheet form, coated with conductive material, such as plumbago, and is then placed in the electrolyte of a plating bath where it is coated with copper on its conductive side. The wax sheet is then removed and the back of the copper plate is cleaned after which molten type metal or any other suitable backing may be applied, resulting in a plate which may be mounted in the usual manner. Invented by Bennett F. Terry, Stamford, Conn. Unassigned. Application February 3, 1944. 2 claims.

2,463,190. NICKEL POWDER FROM PRINTING PRESS PLATES is suitable for the production of electrodes suitable for use in nickel-plating operations. Printing press plates are cleaned and placed in an electrolytic bath consisting essentially of a 3 percent to 25 percent hydrochloric acid solution containing a buffering agent. Nickel is electrolytically stripped from the plates as anodes. Hydrogen sulfide is passed through the bath to precipitate all the metals forming the plate except the nickel while maintaining the pH value at not exceeding 4. Electrolytic bath is heated and filtered to obtain an acid solution of nickel chloride. Nickel is electrolytically deposited on a cathode from the acid solution at a current density between about 3 and 5 amperes p.s.i. to form nickel powder. The powder is suitable for use in making printing plates. Invented by Axel E. Lundbye, North Pelham, N. Y. Assigned to Crowell-Collier Publishing Co., Springfield, Ohio. Application July 1, 1946. 5 claims.

2,463,554. PRESERVATIVE FOR PHOTOLITHOGRAPHIC PLATES permits repeated use of paper and plastic photolithographic plates over long periods of time without deterioration or loss of sharpness. The composition contains eight ounces of gum acacia, one ounce of potassium alum, one ounce of sodium sulphite, and sufficient water to make one quart of solution. When used, the gum forms a thin, air impervious, protective surface coat over the printing face of the plate, the alum serves to harden residual ink at the end of a printing, after excessive ink has been removed and the bleaching agent serves to maintain permanently the clearly defined contours of the images and the clear appearance of the plate. Invented by Edmund D. Osinski and George W. Bucklin, Dayton, Ohio. Unassigned. Original application February 14, 1945 divided and this application February 13, 1946. 2 claims.



Doyle Sheet Dryers on a Webendorfer Web offset.

Doyle Sheet Dryer on a Little Giant.

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• Whether you operate cylinder, platen, rotary, offset, gravure, newspaper or specialty presses, also ruling or coating machines, or folders, Doyle Sheet Dryers will help you solve your problems. Write for complete information:

THE J. E. DOYLE COMPANY

Manufacturers also of Doyle Vacuum Sheet Cleaners

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Printing Inks and Related Chemicals

2,461,564. PROCESS OF PREPARING OIL-ACID MODIFIED ALKYD MATERIAL. A resin is prepared by heating together a drying and semi-drying oil fatty acid with an equimolecular quantity of glycerine in the presence of a drying or semi-drying oil such as China-wood, sun flower, linseed, or other such oils until the reaction is at least 54 percent complete. An equimolecular amount of maleic anhydride is then added, after which the mixture may either be heated to further reduce the acid number, or cooled and stored for use. Certain products obtained may be used in the preparation of vehicles for inks and for coating purposes in general, including pigmented products. Invented by Charles G. Moore, River Forest, Ill. Assigned to The Glidden Co., Cleveland, Ohio. Application June 8, 1945. 5 claims.

2,461,701. CONVERSION OF ALPHA AMINO ACIDS TO ALPHA HYDROXY ACIDS. Patent provides improvements in the conversion of an alpha amino acid selected from the group consisting of leucine, phenylalanine and glutamic acid to the corresponding alpha hydroxy acid by reacting

a solution of the former with nitrous acid. Reaction is conducted above about 70° C. and nitrous acid is introduced into the amino acid solution, contained in a reaction vessel, within a region near the bottom of the solution. Nitrous acid is added at such a rate that practically all of the nitrous acid is consumed as rapidly as it is added. Invention makes possible commercial production of compounds from corn gluten, soybean meal and cottonseed meal. Products are useful as plasticizers, solvents, and as assistant in the printing, dyeing and finishing of textiles. Invented by Paul R. Shildneck, Decatur, Ill. Assigned to A. E. Staley Mfg. Co., Decatur, Ill. Application May 4, 1945. 7 claims.

2,461,918. INKS, such as drying oil type inks, and varnishes modified with polybasic acid resins; rotogravure type varnishes and inks containing a solution of a polybasic acid in a solvent; and heat set type inks and varnishes which are acidic have improved pigment wetting, body and flow, strength of film, tone, and like characteristics when stabilized according to this patent. A method of stabilizing a printing ink composed essentially of a pigment mixed in a dispersion of an acidic resin in a drying oil consists in treating the ink with a polyamine capable of at least partially converting the acidic resin into a polyamine salt of the resin, whereby a polyamine salt of the acidic resin is formed therein. Invented by Frederick Edward Petke, Cincinnati, Ohio. Assigned to Sterling Drug Co., Inc., New York, N. Y. Application August 14, 1945. 16 claims.

2,462,047. PENTAERYTHRITOL CONDENSATION PRODUCTS are useful in the preparation of printing inks as well as for resins having the property of rapidly drying oils and finishing compositions. The method of condensing pentaerythritols with themselves or with other pentaerythritols according to this patent is by treatment with dehydrating acid at high temperatures at which water boils away and preferably above the melting point of the condensation products formed by the treatment. The invention comprises also the penta, hexa, octa, nona, and deca condensation products containing 25, 30, 35, 40, 45, and 50 carbon atoms to the molecule. Invented by Joseph A. Wyler, Allentown, Pa. Assigned to Trojan Powder Co., Allentown, Pa. Application April 26, 1946. 3 claims.

2,462,048. EPOXY TETRAMETHYLOL METHANE AND POLYMERIZATION PRODUCTS THEREOF. This patent is the result of an application which is a continuation in part of application on 2,462,047. This Invention, briefly stated, comprises the compounds of the 1,3-(2,2 dimethylol) propane monoxide class. The heptamer of the above compound may be prepared by heating pentaerythritol with a minor proportion of an acid serving as a dehydration catalyst until the content of the hydroxy groups is reduced to about 30 percent, repeatedly extracting the product with hot water to remove lower polymers of the 1,3-(2,2 dimethylol) propane monoxide and then drying the heptamer which remains undissolved. Invented by Joseph A. Wyler, Allentown, Pa. Assigned to Trojan Powder Co., Allentown, Pa. Application May 10, 1946. 6 claims.

2,462,049. PENTAERYTHRITOL CONVERSION. The products may be mixed with drying oil fatty acids, rosin, tall oil, etc., to form quickly bodying resins. A mixture is formed of a compound selected from the group consisting of pentaerythritol, dipentaerythritol and tripentaerythritol with a salt selected from the group consisting of stannous chloride, cadmium chloride, aluminum sulfate, aluminum chloride and lead chloride in the proportion of 0.3 to 10 parts for 100 parts by weight of the mixture. It is heated to 220° to 265° C. to cause evolution of water from the compound and heating is continued until 5 to 9.9 parts of water for 100 parts by weight of the compound is evolved. Invented by Joseph A. Wyler, Allentown, Pa. Assigned to Trojan Powder Co., Allentown, Pa. Application May 10, 1946. 4 claims.

2,462,341. CLEANING COMPOSITION for rust-stained lacquered surfaces may be used to remove rust and ink stains from cloth, iron, lithographic stones, metallic wires, etc. It comprises as active ingredients from 10 to 50 parts, by weight, of oxalic acid, based on the formula of the dehydrate, and from 90 to 50 parts of a composite softening agent. This consists of a partially sulfonated saturated aliphatic hydrocarbon having at least sixteen carbon atoms per molecule. The degree of sulfonation in the softening agent is from 10 to 50 percent of its total hydrocarbon content. The preferred softtening agent is of type disclosed in 2,334,764. Invented by Breckenridge Kenney Tremaine, Wilmington, Del.

IN 35 SECONDS a Rouse Band Saw cuts a full galley of slugs **to variable measure**—automatically, accurately. No gauge setting is required—no clamping—no measuring! Slugs feed mechanically **at uniform speed.**

Teamed up with a type-setting machine, a Rouse Band Saw does the work of hours in minutes. It cuts sluglines for all types of composition that require frequent changes of line measure.

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"50 Years of Service to the Printing Industry"

Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application September 24, 1946. 2 claims.

2,463,264. DERIVATIVES OF CYCLIC AMIDINES AND PROCESS OF MAKING SAME. Textile materials can be improved by bringing onto these materials, at any stage of their manufacture, the compounds of the invention. Benzimidazoles substituted at the 2-carbon atom by a side chain unsaturated in alpha:beta position may be used. They are obtainable, for example, by condensation of 2-methyl-benzimidazole with aldehydes, such as acetaldehyde, acrolein, crotonic aldehyde, heptatrienal or benzaldehyde according to analogous processes. Discharge colors containing, for example, sodium salt of the sulfonated alpha:beta-di-[benzimidasyl-(2)]-ethylene may be printed on fabrics. After drying, washing, etc., the places discharged possess a higher white content than when the benzimidazole derivative is not used. Invented by Charles Graenacher, Riehen, and Franz Ackermann, Binningen, Switzerland. Assigned to Ciba Limited, Basel, Switzerland. Application December 20, 1943; in Switzerland December 23, 1942. 14 claims.

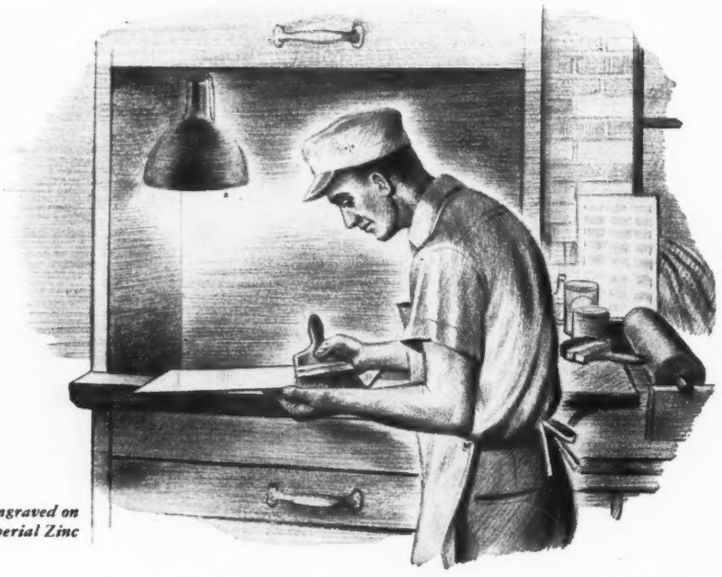
2,463,601. SEPARATION OF HIGHLY BRANCHED PARAFFINS INTO ODERLESS FRACTIONS. Invention provides a method for separating mixtures of highly branched paraffin hydrocarbons into oderless fractions that have a definite boiling point. These fractions are suitable for use as solvents in printing ink, dry cleaners, paints, etc. An inert oderless, oxygen-free gas is bubbled through an olefin-free normally liquid charge stock, containing the hydrocarbons, until all dissolved oxygen is removed from the stock. The stock is then subjected to fractional distillation while the oxygen-free oderless inert gas is still being introduced. The distillate must then be stored under a blanket of the same inert gas. Invented by Chester C. Crawford and Lloyd C. Morris, Bartlesville, Okla. Assigned to Phillips Petroleum Co., Bartlesville, Okla. Application September 21, 1945. 2 claims.

2,463,838. POLYMERIC COLOR COUPLERS. The compounds may be used for printing pastes, padding materials for textile dyeing, etc. They may be mixed with softeners such as cottonseed oil, castor oil, acetyl laurin, etc. One compound was prepared by dissolving a 5 g. portion of acetoacetic ester and 7.8 g. of the ethyl ester of acetone dicarboxylic acid in 100 cc. of boiling xylene to which was added 6.23 g. of powdered p-phenylenediamine. The mixture was refluxed for fifteen minutes, the supernatant liquid removed by decantation and the solid residue air-dried. The polymer when treated with diazotized meta-amino phenyl trimethyl ammonium chlorides gave a red color. Invented by Cyril D. Wilson, Metuchen, N. J. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application February 18, 1943. 4 claims.

2,464,075. A PROCESS OF MAKING AN ADHESIVE involves digesting soya bean meal with treating material consisting of an aqueous alkali solution and dissolving the protein and suspending hemicellulose in the solution in finely divided form while not attacking the cellulose fiber. Mixture is fed to a screen surface having openings of not larger than 200 mesh fineness where cellulose fiber is matted and retained and the hemicellulose is freed by rapid vibration to pass through with the liquid. Hemicellulose is then precipitated together with protein by acidulating the liquid. The hemicellulose acts as a pigment suspending agent, a quality not possessed by the protein alone. Adhesive is usable in preparing an aqueous ink used in printing wall paper. It is also usable in laminating adhesives, paper sizer, etc. Invented by Glenn Davidson, Aurora, Ill. Unassigned. Application June 2, 1948. 4 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

"Acid Test" IS IN THE ETCHING



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● As every engraver knows, there is much more to a sheet of good engraving zinc than is ever apparent on visual inspection. The "acid test" of the fine, uniform grain of Imperial Zinc is in the etching . . . the way it takes powdering with only normal care to prevent shoulders and undercutting . . . the ease with which it stands up even under multiple bites when extra depth is called for.

Put Imperial Zinc to the "acid test" yourself. Order a case today. You'll agree there *is* a difference.

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Wet and Dry Print Varnish

A WET and dry print varnish for the metal lithographing industry has been developed by The Watson-Standard Co. Manufacturer states it can be used successfully over all kinds of inks, wet or dry; it will level out over any type or color of ink, providing better depth to the color; it will not wrinkle, go flat or bleed. Complete information may be obtained from the manufacturer, through *Printing Equipment Engineer.*

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SPACEBAND

CAN BOAST OF TRUE INTERCHANGEABILITY OF SLEEVE AND WEDGE

The precision necessary for this great advance in spacebands is made possible by exclusive manufacturing methods. When a sleeve or wedge breaks, you save by making your own repairs—instantly. No fitting is required. You have a new band in a jiffy.

This is possible because of ingenious hollow-head pin which locks and unlocks—and never falls out.

To this add the finest steel obtainable, spring tempered to extra hardness—and withal less brittle. Net result: the best spaceband known.

Comes in six thicknesses, Extra thin to Extra thick. Table of measurements shown in folder which will be mailed on request.

Order from nearest branch or agency.

See us at Chicago **A.N.P.A.** *Mechanical Conference*
Palmer House • June 6, 7 and 8th

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I'LL BUY THAT-

It's a Challenge!

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For more than a half-century, printers have bought Challenge equipment with confidence. And throughout the years, the Diamond Power Paper Cutter has been the popular choice—so much so that today there are many more Diamonds in service than all other makes of hand clamp power cutters combined!

The massive base and heavy arch construction . . . extra heavy knife bar . . . safety paper guard . . . double motion starting lever . . . double equalizing brake . . . "easily-squared" back-gage . . . "duplex" measuring tape . . . table light and tape magnifier . . . are just a few of the features that have made the Diamond the dependable product of a reliable manufacturer. The Diamond is built in three sizes: 30½, 34½, 36½-inch. Write for complete information and prices today!

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GRAND HAVEN, MICHIGAN

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"Over Fifty Years in the Service of the Graphic Arts"

DEALERS IN ALL PRINCIPAL CITIES

EXECUTIVE Cs

Personnel of the Harris-Seybold Co. has been active in Graphic Arts circles according to announcement. C. B. Miesse, Research Chemist, presented a paper on Ion Exchange at the April meeting of the Technical Assoc. of the Lithographic Industry in Chicago . . . Don Grant, Supervisor of Harris-Seybold's Printing Process Laboratory, was principal speaker at the April meeting of the Dayton (O.) Club of Printing House Craftsmen. At this meeting, the Dayton Craftsmen observed Offset Night . . . L. R. Beck, Export Manager, and Frank Gilbert, Service Representative, are currently touring Graphic Arts centers in Asia and Europe. Their trip will include most of the major cities in countries outside the Iron Curtain of the two continents . . . J. C. Dabney, Eastern District Manager, and R. P. Tyler, Installation and Service Manager, were principal speakers at an equipment display held recently at the company's Eastern District Headquarters.

Homer E. Sterling has been advanced to associate professor in the Carnegie Institute of Technology Department of Printing Administration effective September 1. Sterling, who joined the Carnegie faculty in 1926, was named Associate Professor of Graphic Arts Design in the announcement. A graduate of Carnegie, he also attended Allegheny College.

Walter C. Crighton of the New London (Conn.) *Day*, Secretary of the New England Mechanical Conference, spoke at the Composing Room Clinic of the PNPA held recently in Harrisburg, Pa. His subject was *More Attractive Newspapers.*

William T. Hansen has joined Guide-Kalkhoff-Burr, Inc.—The Gallery Press, of New York, N. Y., as Quality Control Supervisor. He was formerly associated with The Printing House of William Edwin Rudge, Mount Vernon, N. Y., for nearly 25 years. Starting as a pressman with this establishment in 1924, he rose to foreman-superintendent and then to full charge of production. Hansen served his apprenticeship in printing plants in Denmark, Norway and Sweden. His first job after arrival in this country in 1919 was as pressman on the old New York *World*. He has also served as pressroom foreman of the printing plant of the Metropolitan Life Insurance Co. In addition to his duties as Quality Control Supervisor, Hansen will direct the purchase and production of offset-lithography and gravure.

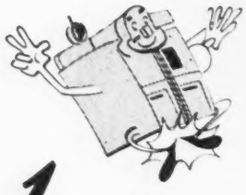
Al Cook has joined the sales staff of Roberts and Porter, Inc., as consultant to the Graphic Arts on film problems. He was formerly with the DuPont Company in the Photo Products Technical Sales Section. He will make his headquarters in the company's Chicago office. Cook is a graduate of Northwestern Technological Institute.

Augment RIT Facilities

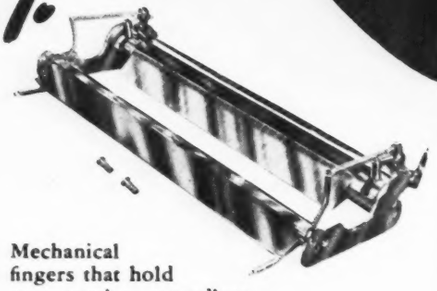
Two new cameras have been recently installed in the Department of Publishing and Printing of the Rochester Institute of Technology. A Chemco Model J, manufactured by Chemco Photo-products Co., Inc., is equipped with mercury vapor lights and will be used in experimental work now being carried on by the photoengraving laboratory. A 31 in. Precision Camera made by R. R. Robertson Co., augments the ATF 24 in. Camera now used by the offset department. The Precision Camera is equipped with an automatic diaphragm control system, a registering type position holder, vacuum film holder, stay flat holder and micro stop screen compensator.

NOW! 2 MORE REASONS WHY

MONOMELT PLANE-O-PLATE is the PLATE SHAVER for YOU!



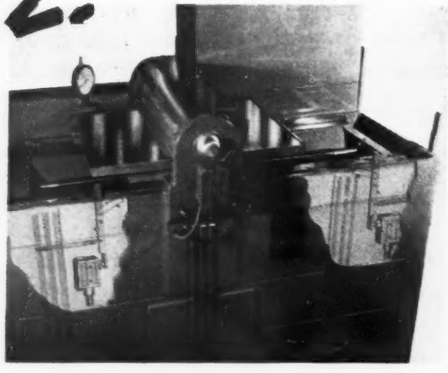
1.



The MONOMELT Plane-O-Plate, Model 402, already has a well deserved reputation for speed, accuracy and versatility. It shaves them all—electros, stereos, zincs, plastic, stereo and wood base—and always turns out smooth, uniform plates that cut makeready time and assure faithful reproduction in printing. Plane-O-Plate will handle single plates up to 17½" x 22½", or a number of smaller plates up to the full capacity of the bed.

Mechanical fingers that hold even tension regardless of irregularities guide the plate, or bed full of plates, right up to the edge of the rotary helical cutter. Combined with the fingers is a safety bar that eliminates the possibility of running a too-thick plate into the cutter.

2.



Safety levers and micro switches (illustrated in this cutaway view) plus a thread relief on the lead screw positively limit the forward and back movement of the bed.

NOW Plane-O-Plate is better than ever.

WRITE TODAY for full information.

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40 discussion sessions will be led by nationally known specialists from the graphic arts industry.

Discussion topics include:

Plant layout	Production standards
Cost systems	Control systems
Job costs	Production planning

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For details on program and complete list of discussion topics, contact:

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Stereotype superintendents tell us that men in their departments can't praise BEVERIDGE DRY MATS too highly. They like them. That's because the uniformity of BEVERIDGE DRY MATS makes their work easier, more efficient and less trouble. You can couple that popularity with low cost. Write today and let us give you the complete story.

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The Beveridge Paper Company
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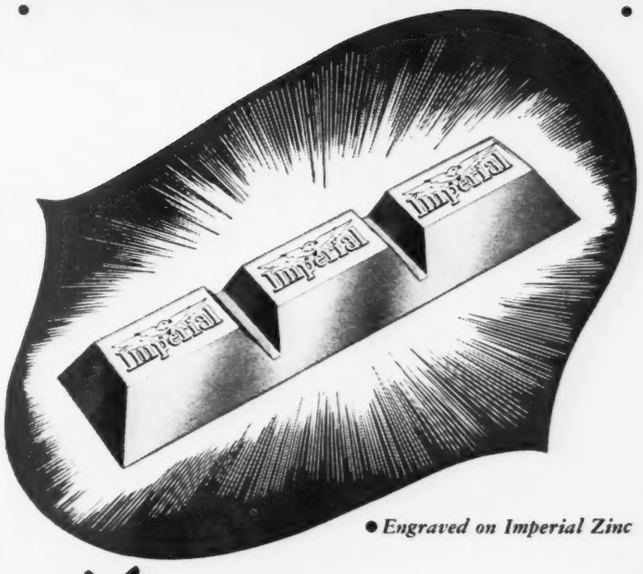

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• A better print . . . at lower cost . . . this is one competitive problem with which all production executives are faced. Because type metal is a factor of such importance both in printing quality and cost, this responsibility we gladly share.

Imperial Type Metal *plus* Imperial Service provides a positive guarantee of metal quality. It also insures that the metal in your machines will *always* be of exactly the proper formulation to work to best advantage under whatever special conditions you have in your plant.

When you specify "Imperial" you immediately unload all your metal problems onto metal specialists whose interests are *your* interests because they have no other interests to serve.

You'll find the Imperial Type Metal Man a good man to know. At your request we'll gladly put you in touch with him.

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TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

Miami *Herald* Adds Presses

The Miami (Fla.) *Herald* recently completed the installation of eight new Goss Headliner units with four half decks for color printing and two pairs of Uni-Flow folders. The presses have a top running speed of 60 thousand newspapers per hour.

BETTER
FASTER
MORE PROFITABLE PRINTING
5 COLORS PRINTED DRY 5 SECONDS
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
NO PRESS WASHUP
ROLL PAPER 7-12% CHEAPER
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EBCO Press Changes—Although formal announcement as to what they consist of has not been released, improvements and design changes on the 22 in. by 34 in. EBCO Offset Press are described by Harold W. Gegenheimer (center-rear), Manager of the Electric Boat Co.'s Printing Machinery Div. The occasion was a sales conference held recently at the company's Groton, Conn., plant. Left to right are: Mal Brewer, Al Johnston, both District Managers; Mr. Gegenheimer; Peter Rice, Service Manager; Charles Harwood, District Manager; and DeWitt G. Manley, Sales Manager.

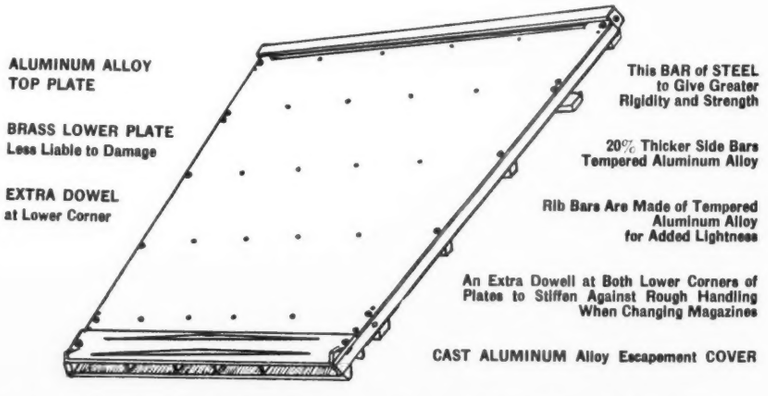
Flint Color Selector

HOWARD Flint Ink Co. has introduced a Color Selector for the selection of lithographic inks. The outer cover is of Vinylite plastic laminated over a 4-color processed company trademark. Binding is done in red metal Cercla looseleaf. Main section of the Selector shows 44 color swatches lithographed on coated and uncoated papers. Other sections are devoted to offset blacks, offset gloss inks and a choice of three sets of process colors. Because of the cost, manufacturer states distribution of the Selector is limited to users of lithographic inks. It is available through *Printing Equipment Engineer*.

Line-composing Machine Parts

PARTS, repairs and accessories for line-composing machines are listed in a catalog recently released by Montgomery Co., Inc. Parts for the casting, assembling, and distributing mechanisms are listed and illustrated in the 104-page catalog. Included is a cross index for locating the page number of the part. A price list is included.

A GREATLY IMPROVED


ALUMINUM ALLOY TOP PLATE
BRASS LOWER PLATE
Less Liable to Damage
EXTRA DOWEL
at Lower Corner
This BAR of STEEL to Give Greater Rigidity and Strength
20% Thicker Side Bars Tempered Aluminum Alloy
Rib Bars Are Made of Tempered Aluminum Alloy for Added Lightness
An Extra Dowell at Both Lower Corners of Plates to Stiffen Against Rough Handling When Changing Magazines
CAST ALUMINUM Alloy Escapement COVER

MAGAZINE FOR LINOTYPE MACHINES

Years ago we made magazines of duralumin, an aluminum alloy metal which is light yet gives great strength. These magazines met with great approval, but once in a while became damaged at the entrance. While it is possible to repair it requires greater skill than in case of brass. Most always the damage was confined to the lower plate.

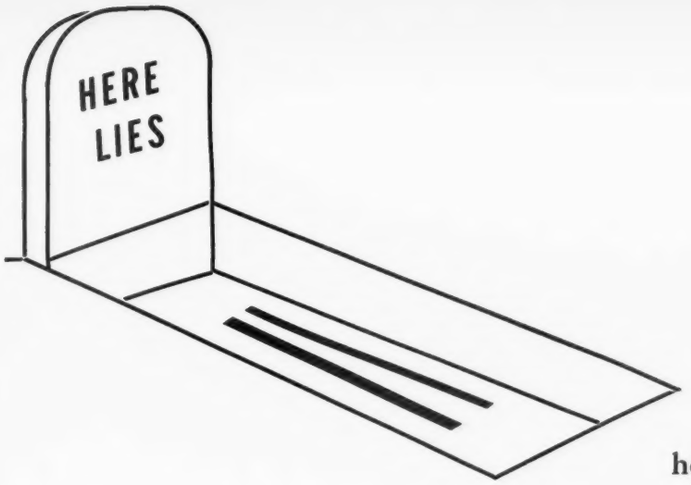
The MONTCO improved design incorporates the best features of previous designs and the resulting magazine is what we believe represents the best possible combination. The top plate is made of duralumin so as to take advantage of its lightness and great strength. The bottom plate is of brass because it meets the peculiar conditions needed at that point. The partitions are made of polished duralumin with a mirror like finish which enables you to locate flat matrices with very little effort.

MONTCO magazines are in daily use throughout the USA and all foreign countries using the standard 90 channel magazines. Our best recommendation is the fact that the "Half and Half" design has been copied by the other competitive manufacturers.

We welcome the opportunity to send Montco magazines on trial. The price for the full length style is only $140 fob Towanda, Pa. Surely with wages at present high levels you cannot afford to have your operators running fonts out and in your present magazines. Order today for a free trial at our expense. Can be purchased through independent supply houses.

MONTGOMERY CO., INC.

TOWANDA, PA.
Originator of the Half and Half Magazine



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helps you turn out fine work . . . fast.

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CHARLES ENEU Johnson AND COMPANY

GOOD INKS SINCE 1804

10th and Lombard Streets, Philadelphia, Pa.

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BY NEW ENGLAND

A Statement:

We do not claim that this fine new blanket will eliminate all the ills that beset the printing industry! We do not feel that our blanket can overcome conditions caused by faulty plates—worn bearings or gears—off-gauge newsprint—improper ink—non-parallel cylinders—poorly set rollers!

We do, however, believe that this new "Regal" Monocork is the answer to several conditions that have heretofore been considered necessary evils in cylinder packing. Experience shows that "Regal" does not "creep"; it also seems to hold other types of packing in line when used in combination; indentation and recovery factors are excellent; and above all, it is an ideal printer!

YOU BE THE JUDGE!

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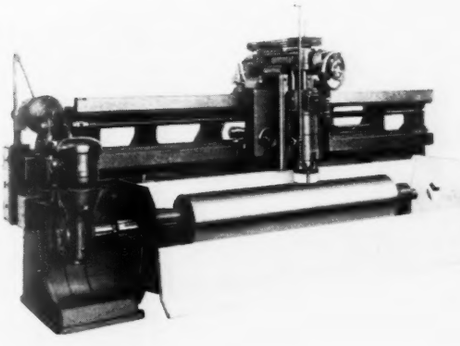

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GRINDING AND POLISHING MACHINE

Precision Built to Grind and Polish to .0003"

Manufactured in two sizes, each being able to handle varying diameters and lengths of cylinders. Special Intaglio stones, using a combined concentric and eccentric motion give a smoother surface in shorter time than obtained with other machines. Water as a coolant eliminates all dust. Precision automatic feed—either continual or at end of each traverse—compensates for stone wear while grinding. When polishing cylinders, stone is "floated" with continuous adjustable pressure, resulting in a higher finish than obtained with paper. Variable speed motors permit a choice of grinding and polishing speeds.

STANDARD PROCESS CORPORATION

Manufacturing Gravure Equipment & Supplies

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Book of Alphabets

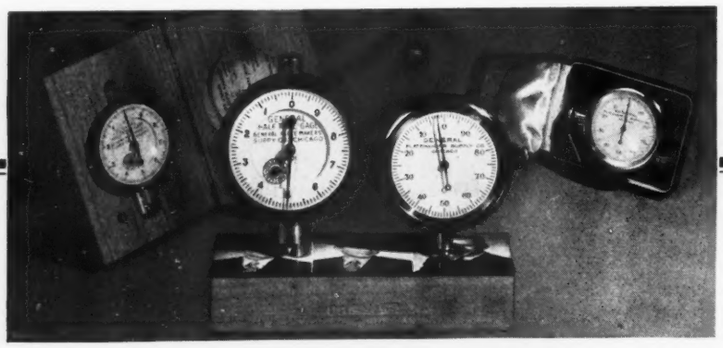
INTERTYPE Corp. announces the publication of a new booklet titled *Alphabets of 180 Intertype Faces.* Designed primarily for printers and publishers who are interested in the study of type faces, the booklet will also aid students of typography in printing schools, schools of journalism, advertising classes, press associations, etc. It contains 12 pages with exhibits similar to those carried in the Intertype Specimen Book. The booklet, 7½ in. by 10½ in. in size, shows alphabets, figures and other characters in 180 leading Intertype faces. Also shown are special alternate characters made for each face which can be furnished in place of the regular characters or as sorts. The booklet will be mailed free upon request to Intertype Corp., 360 Furman St., Brooklyn 2, N. Y.

FM Plays Host

The Whiting, Ind., plant of Federated Metals Div., American Smelting and Refining Co., was host recently to a group of metallurgy students from the Colorado School of Mines. The inspection tour, one of a series sponsored by Federated in cooperation with colleges and universities, was conducted by A. S. Wigle, Plant Superintendent at Whiting.

Magazine Binding Bulletin

THE Lounsbury Mathod of Magazine Binding is described in a recently released bulletin. The Lounsbury Method incorporates the use of a slotting device on a folding machine or press folder for cutting slots through each signature sheet and the application of glue to bind the pages together. Sponsor claims this enables the magazine to remain flat when opened. Copies of the bulletin may be obtained by writing *Printing Equipment Engineer.*



ELIMINATE GUESSWORK!

THE GENERAL HALFTONE GAGE is accurate and foolproof. Dial measures only 10/1000 in circumference. You can actually measure 1/10,000 variation in depth because each 1/1000 is graduated into 1/10,000. Indicator moves a full ½ inch for each 1/1000 which insures very accurate readings. Inner dial shows depth measurements up to 65/1000. Needles are easily removable and adjusted. Fine wood case has printed standard depth chart and slot for extra needle.

As shown at left	$56.00
Case	3.00
Extra Needle	1.00
General Standard Depthometer 0-90 1000	
As shown on right	$23.50
Case	3.00
Extra Needle	1.75

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By all tests

The Best Zink Cut Cement...

No other cement approaches BOOTH'S ZINK CUT CEMENT as a means of quickly mounting cuts and holding them fast. Prove this to your satisfaction.

PRICES: In the United States 75c per tube, $6. a dozen tubes

Use *Booth's* Rubber Rolls

FOR LINE COMPOSING MACHINE KEY BOARDS

Until you do, you will never know how smooth and highly responsive to key board cam action a good rubber roll can be. They have maximum cam gripping qualities and resistance to glaze. They are of even diameter when applied properly to the roll shaft.

PRICES: $1.45 per pair 7.75 per dozen

E. A. BOOTH RUBBER CO.

2855 SCARBORO ROAD
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IMPORTANT ANNOUNCEMENT

To organisations with their own sales force in contact with firms in the Printing Industry

A group of British Companies manufacturing detergents, polishes and cleaning preparations of importance to the printing industry, have decided to place their United States selling arrangements in the hands of area sales distributors and/or non-competitive manufacturing organisations which already employ their own sales force and are desirous of widening their range.

The products are manufactured to the highest standards, and are well presented. The selected distributors will be given ample sales promotional support. The President of the Companies concerned is now in New York and organisations of standing are invited to communicate with him personally.

. . . MR. J. LISS . . .

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FASTER
MORE PROFITABLE PRINTING
75,000 FOLDING CARTON BLANKS PER HOUR!
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
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NO PRESS WASHUP

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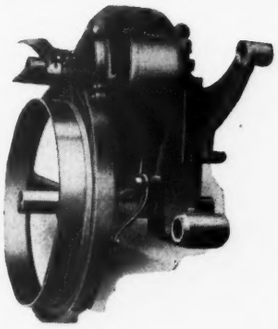
● QUICKLY INSTALLED
● EASILY ADJUSTED

QUIETLY EFFICIENT IN SERVICE!



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Offset
MOTOR

Installing and adjusting is a matter of mere minutes. Cushman, oldest power unit for typesetting machines is delivering excellent service in thousands of composing rooms. Use it on your Linotype or Intertype and enjoy the same lasting satisfaction. Folder mailed on request.

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Oldest in the Country
First in the Field

Wood Mats are superior mats because their manufacture is carefully controlled to give uniform, **dependable,** stereotyping performance under difficult stereotyping conditions.

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YEARS EXPERIENCE
Designing

Newspaper & Printing Plants
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SOLD BY ALL DEALERS

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VIBRATING
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JOGGERS
Save Money and Time!

Reduce the high cost of production by speeding up jogging — getting more stock to the cutter, to the press, to the bindery—in a shorter time.

Write for Folder

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577 Lexington, Homer City, Pa.

Officers of Technical Association of the Lithographic Industry (TALI) at first annual meeting, Chicago, April 1949. Left to right, these technical men are: John McMaster (Eastman Kodak Co.), Program Committee; Wm. H. Wood (Harris-Seybold Co.), Auditing Committee; G. S. Hammer (Forbes Litho), Nominating Committee; A. W. Cornell (Forbes Litho), Director; Frank Preucil (Gerlach-Barklow Co.), Director; Michael H. Bruno (LTF), President; Robert F. Reed (LTF), Papers Committee; Marvin C. Rogers (R. R. Donnelley), First Vice President; George W. Wilhelm (Rand-McNally Co.), Secretary-Treasurer. Other officers and committee men not shown are: H. R. Leedy (Harris-Seybold Co.), Second Vice President; F. H. Frost (S. D. Warren Co.), Publication Committee; R. M. Schaffert (Battelle Memorial Institute), Membership Committee.

TALI

decides to retain separate identity—First meeting in Chicago

THE first annual meeting of the Technical Association of the Lithographic Industry (TALI) was held in Chicago, April 12 and 13, 1949 and was attended by 131 technical men in the lithographic and allied industries.

Twelve papers were delivered on a variety of subjects of interest to lithographers. High point of the meeting was the discussion by R. M. Evans (Eastman Kodak Co.) on *Seeing Light and Color* which was illustrated with more than 100 color slides.

J. A. C. Yule, Eastman Kodak Co., described a method for measuring lens and camera flare and in another paper covered the black printer in color separation photography.

The paper delivered by Dr. Frederick Frost, S. D. Warren Co., was most interesting and described a new principle in the manufacture of coated offset paper.

The new Post-Cronak treatment developed by the Lithographic Technical Foundation was described by Dr. P. J. Hartsuch. This procedure is claimed to completely eliminate residual albumin or casein on surface coated plates and thus makes remarkable improvements in their printing and life on the press.

In TALI's business meetings, chairmen for the various committees were chosen. The next meeting of the group is scheduled for the second week in April, 1950 in Rochester, N. Y.

Discussion of recent "feelers" toward the organization of an over-all technical group for the entire Graphic Arts with which would be incorporated TALI was discussed at length and resulted in the following resolution which was presented by George Wilhelm, Secretary, and adopted unanimously:

"Be It Resolved That: In view of the short history of TALI as an organization and further in view of the objectives as expressed at early organization meetings, and embodied in its constitution, it is the concensus of this Board that TALI continue its organization and objectives as at present; with membership open to technical workers in all Graphic Arts fields. It is further the intention of this Board that it will cooperate with such other Graphic Arts technical groups as may be organized with objectives similar to those of TALI."

Other readers of *Printing Equipment Engineer* will appreciate hearing about any time-saving device developed in your plant. Just write informally in a letter addressed to the editor.

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18,000 MULTICOLOR SHEETS PER HOUR!
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HYDRAULIC ELEVATING TURTLE
by NOLAN

This new turtle is equipped with hydraulic mechanism for raising and lowering top. Top has 5" vertical travel. Foot pedal provides smooth, even fluid action for raising and lowering table top. There are positive limit stops with a special high-low device giving ¼" differential for sliding forms on or off easily.

It is ruggedly built to give years of service

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1331 East Dominick St.
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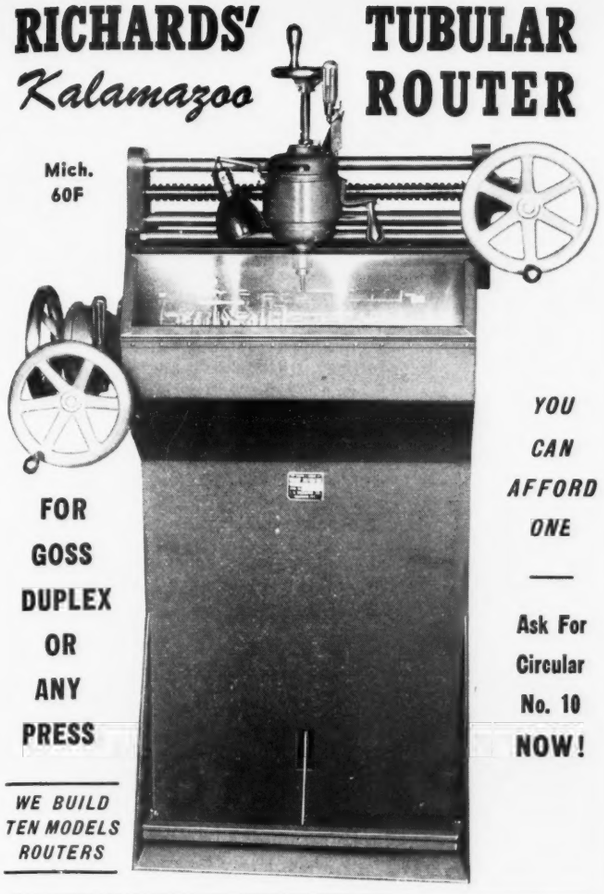
RICHARDS' TUBULAR ROUTER

Kalamazoo

Mich. 60F



FOR GOSS DUPLEX OR ANY PRESS

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WE BUILD TEN MODELS ROUTERS

A BAUM FOLDER user writes:

We have used one Baum (25 x 38) on two shifts, for three years, to fold all we print on two Horizontals, two Verticals; two 56's; one No. 3 and one Pony. Truly a real accomplishment. In 8 hours just ran 39,200 folders, 16 pages, 60 lb. coated stock, sheet size 22½ x 35.

We congratulate you for giving the printers a reasonably-priced, precision-built efficient 25 x 38 folder.

Photographic Copy of Above Letter Yours for the Asking.

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"And if you ask me the second most important thing in buying a mat, I would say 'quality' and third I say is quality . . . Your big idea of saving a penny by some kind of finagling doesn't go over with me at all . . . As far as I am concerned, we stay with Certifieds. They kept up quality when others didn't and they are keeping it up today. Certifieds are the mats for me."

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Certified DRY MATS

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Improve working conditions around your stereotype-melting pots... bring down surrounding temperatures as much as 30 F!

G-E cast-in immersion heaters enable you to do this because they're immersed directly *in* the molten stereotype metal. No heat is wasted; full heat is applied to the metal.

Electric stereotype melting with G-E heaters gives faster, more uniform heat distribution through precise temperature regulation. This adds up to minimum surface dross, more and better castings.

Whether you're modernizing your present plant or planning a new one, investigate how you can convert quickly and easily to the modern, electrical way of stereotype melting. The Heating Specialist in the nearest G-E Office will be glad to discuss this with you.

Write for free bulletin GEA-4653. *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

Joint Conference

(Continued from Page 33)

During this meeting Charles E. Gardner, Ludlow Typograph Co., in discussing his equipment, said the Ludlow is very simple in design and mechanism, making the upkeep cost low. He added that the Ludlow was in line with the ever-growing trend to produce as much composition as possible in slug lines.

John L. Davis, Assistant Director of Sales, and John Hilpman, Mergenthaler Linotype Co., conducted a portion of the program on the subject: "Machinists problems." Davis was emphatic concerning the need to keep line-casting machines clean to avoid troubles.

Pressroom and Stereotype

Under the team guidance of Mr. Rolle, and his stereotype superintendent at the Newark (N.J.) *News*, John Penrey, a joint session on coordination of press and stereo problems featured two outstanding speakers.

Charles Frederickson, Mechanical Supt., Westchester County Publishing Co., New York, emphasized that cleanliness is very important in pressroom management. He said: "The man with the oil can is a darn important guy, but he must make a study of his equipment as to what needs more or less oil."

Tackling the problem of maintenance, he said: "Spare parts are like an insurance policy—they're an investment, not an expense." He then went on to urge a full stock of safe tools on hand, good wrenches, screw drivers, spare coils, extra push buttons, generator brushes, sheerpins, and rubber rollers for all emergencies."

Frank A. Donnelly, Mechanical Supt., Metro Associated Services, New York, N. Y., in his talk, declared the greatest contribution the stereotype department had made to the newspaper industry was in the saving of newsprint. He advised that the new electronic pre-scorcher and the vacuum scorcher are a must if excessive shrinkage is required.

D. M. Melegari, Stereo Foreman, McKeesport (Pa.) *Daily News*, who last June installed a Stereotex hydraulic direct pressure matrix press, described how he had discontinued the operation of his roller on both color and black and white.

Mr. Dyer, who conducted the luncheon meeting in connection with the conference, bluntly told the delegates that: "I predict we will be called upon by a harrassed publishing industry within the next year to do our jobs better, to help reduce operating costs while maintaining quality of product and service. These meetings will have been successful if we find ourselves better equipped to perform this assignment."

At this luncheon, C. M. Flint, ANPA Research Director, discussed the national research program.

To Add Wood Press

The Hartford (Conn.) *Courant* has recently placed its order with Wood Newspaper Machinery Corp. for a press consisting of four newspaper units, a folder and four reels equipped with pneumatic tension for automatic web control. Specifications include automatic clamps for locking stereotype plates on the cylinders.

BETTER
FASTER
MORE PROFITABLE PRINTING
5 COLORS PRINTED DRY 5 SECONDS
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
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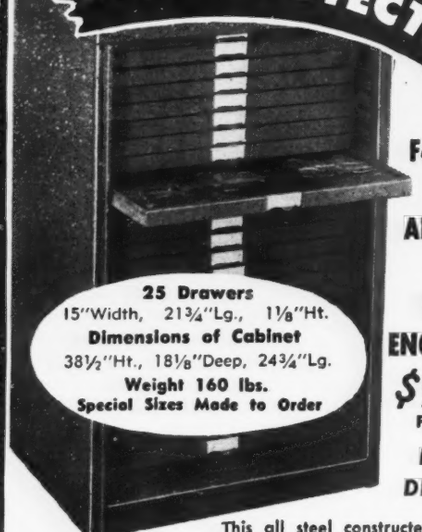

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At last printers can make their own rubber printing plates for one-fifth the cost of buying electros or rubber plates from trade makers!
It is practical and profitable for nearly any print shop. Make your own rubber printing plates in a few minutes and take advantage of all the time-saving, cost cutting features. Anyone in the shop can operate it! DICO makes rubber stamps, too!

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$.75 per line 1.9/16" wide. Minimum ad 5 lines, 25 characters per line. Cash with order.

CLOSING DATE—15th of Month preceding Date of Issue.

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

FOR SALE

Two - motor full automatic newspaper press drives and control panels, 220 volt, 3 phase, 60 cycle AC, complete with resistors and push button stations:
2 Cutler Hammer 40/3 HP faceplate type, equipped to parallel.
2 Cutler Hammer 40/3 HP crosshead type, equipped to parallel.
All used, serviceable, being replaced with larger drives. Immediately available.

The Eastern Color Printing Company
Waterbury 91, Conn.

WANTED—Large Southern California Photoengraver wants practical electrotyper to install and operate foundry on shares. Small investment. Reply Box 328, Printing Equipment *Engineer*.

FOR SALE

Model 14 Used Linotype, Serial No. 39,375 Single Keyboard with 3 main and one used magazine. Electric Pot. Excellent condition.

Hederman Brother, Printers
Jackson, Mississippi

SALESMAN WANTED

Leading printing machinery manufacturer seeking experienced graphic arts salesman. Maximum commissions and salary. Car necessary. Include photo and details in first letter.

Reply Box 327 — *Printing Equipment Engineer.*

FOR SALE: Newspaper has 4 Model AE-20 new varitypers and 1 Model A-20 priced to sell. Reply Box 325, Printing Equipment *Engineer*.

★ **STAR CUT CEMENT** ★
Since 1936 — *For Mounting* — Since 1936
CUTS...STEREOTYPES...ELECTROTYPES
65c per tube-$5.50 per doz. $5.00 per doz. in two doz. lots, $4.50 per doz. in gross lots.
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OVER ONE HUNDRED YEARS OF ROLLER MAKING
SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
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THERE'S A FACTORY NEAR YOU:
ATLANTA 3 · CHICAGO 5 · CLEVELAND 14 · DALLAS 1 · DES MOINES 2 · DETROIT 10 · HOUSTON 6 · INDIANAPOLIS 2 · KALAMAZOO 12 · KANSAS CITY 6 · MINNEAPOLIS 15 · NASHVILLE 3 · OKLAHOMA CITY 6 · PITTSBURGH 3 · ST. LOUIS 2 · SPRINGFIELD, O.

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IT'S AN Ideal Year For ROLLERS
First-aid for top quality and production!
Cool-operating, soft, precision inking rollers for printing on high-speed presses. Can be used with Aniline, Heat-set or Linseed-base ink formulas. Permit high speed quality production at minimum cost.
IDEAL ROLLER & MANUFACTURING COMPANY Chicago 8, Illinois · Long Island City 1, N.Y.

Dallas News

(Continued from Page 31)

Here packer boys lift bundles of papers onto one of two Jampol feeder machines —50 ft. stainless steel lines of electrically-driven metal rollers.

These feeders are connected with Signode wire-tying machine. Enroute to the tying machines a mailer puts brown wrappers around the bundles. At the end of the conveyor a man pushes the bundles into one of the electric tying machines, which encircles the bundle with a wire strand, ties it and ejects the bundle onto conveyors leading out to the loading dock. The Signode machine is capable of delivering 20 bundles per min. to the conveyors.

Plans are to install two pusher machines, which will further mechanize the operation, automatically pushing the bundles off the conveyor rollers into the tying machine, eliminating the hand operation. There will also be a telescopic conveyor on the loading dock adjacent to the belt conveyor for rapid delivery into the trucks.

95% Mechanized

Something like 9000 sq. ft. of working space is provided in the new mailing room. Where in the old building mailing room operations were about 50 per cent manual, now the *News* has one of the most highly mechanized operations in the country, with more than 95 per cent mechanization. Against a former capacity of handling 28,000 papers per hour, and a schedule which used to keep mailing room men on the job until as late as 5 a.m., the new setup takes care of up to 100,000 papers an hour, and the crew is usually ready to knock off by 3 a.m.

Like the rest of the building—the mailing room is air-conditioned and has fluorescent lighting.

Twenty regular crewmen work six nights a week in the mailing room. On Saturday night the crew is stepped up to 35 men, supplemented by 75 schoolboys, to handle the Sunday edition. The boys insert the comic section into the other sections as they come into the mailing room. Comics are printed during the week and stored in the mailing room, ready for speedy handling.

The Loading Deck

There are five delivery outlets from the mailing room to the circulation department loading dock. This dock is 175 ft. long and will accommodate 20 trucks. Trucks move freely without obstruction from any other traffic. Here, as elsewhere, the planning always was based on seeing that, regardless of the operation, intake and outgo would not interfere with one another.

As Deputy points out, "The plan and layout of the industrial section of the project is based primarily on the ability to bring supplies in and dispatch the printed product."

Dimensionally, the business section is 200 ft. wide and 100 ft. deep, while the industrial section narrows somewhat to a width of about 154 ft. but goes back a depth of approx. 208 ft.

Railroad Dock

Extending behind the industrial section is the *News*' railroad dock, which runs back another 157 ft. This dock accommodates car openings on four 40 ft. cars. The Jampol conveyor from this unloading dock to the basement travels at a rate of 45 ft. per min.

Unloading Newsprint

Theoretically, it would be possible to unload a car of paper in 7 min., although actual time is much more. Rolls of newsprint go into the basement, which has a capacity in paper storage of 3 thousand T. Ink storage comprises two 9000 gal. tanks. Basement also contains reel room and, in another corner, the heating and electrical equipment. Basement spreads over an area 200 ft. by 300 ft. Fork lift trucks move paper rolls, and can go four rolls high.

Also in the basement are facilities for colored help.

There is a file room, 40 ft. by 75 ft., for back copies of the *News* and archives. Carpentry shop and paint shop are also provided.

The area behind the building is approx. 200 ft. by 500 ft., allowing ample room for all vehicular movements.

Building Details

Granite from Minnesota and Indiana limestone face the business section of the building. Color schemes throughout are in subdued pastel shades, sometimes varying within the same room.

While lighting generally is fluorescent, that in the pressroom is incandescent. Pressroom lights, and emergency incandescent lamps at other points, will remain on, even if the main system should fail. A minimum of 50 candle-power is provided throughout.

To keep the building cool against the hot Texas summers, 300 T. of Carrier air-conditioning equipment are employed. This machinery is located at the fifth floor level, in the cooling tower or penthouse. It consists of two 150 T. units.

Building is heated from two 230 h.p. boilers. There is a 73 h.p. water heater. Heating equipment is in the basement.

John W. Foster, President of Tingue, Brown & Co., has announced the appointment of Edward G. Ahearn as representative in the territory formerly covered by Don Robbins. His territory includes the Metropolitan area of New York, as well as the states bordering the East Coast from Pa. to the Dist. of Columbia. Ahearn was formerly associated with the Mechanical Dept. of the New York *Times* and as Production Manager of Hearst Newspapers.

ADVERTISERS' INDEX FOR MAY 1949

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WILLIAM L. OSBORN, Eastern Manager, 1728 Grand Central Terminal, New York 17, N. Y. Phone MUrray Hill 6-5980.

EUGENE A. POWERS, Midwest Manager, 612 N. Michigan Ave., Chicago 11, Ill. Phone: SUperior 7-2444

ROBERT C. CRAIG, West Coast Representative, 601 S. Vermont St., Los Angeles 5, Calif. Phone: FAirfax 1363

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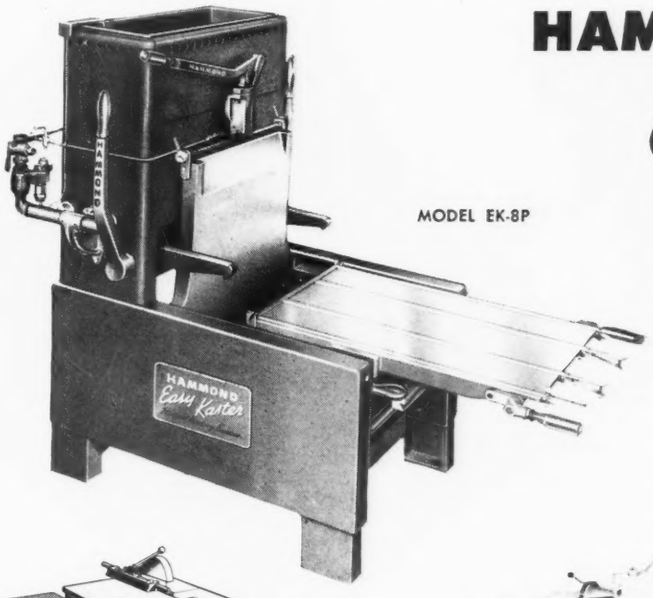
HAMMOND FULL-PAGE *Scorcher*

MODEL T23-30

The Hammond Full-Page Electric Scorcher gives you these advantages:

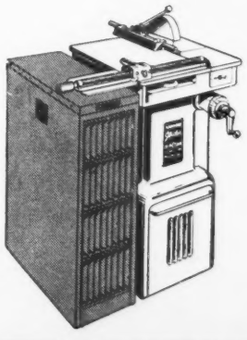
1. Large capacity, 23" x 30", which accommodates any size mat with tail-piece.
2. Maximum moisture elimination with new grilled cover construction.
3. Floating hinges allow stacking of mats and automatically levels the cover.
4. This cover construction assures permanent flatness under heat.
5. Any desired temperature with variable thermostat. Fast heating up time — 20 minutes.
6. Aluminum bed to prevent rust and provide even heat distribution.

HAMMOND *EasyKaster* "8"



MODEL EK-8P

The Hammond Full-Page EasyKaster "8"s large 800 lb. melting pot and efficient gas combustion chamber provides a continuous supply of hot metal. Casts are made as fast as they can be handled. Valve controlled pouring provides any desired rate of metal flow without spilling or splashing. The bed *rolls* into pouring position. Four point spring loaded automatic lock-up insures equal pressure distribution over entire area of beds. Hammond EasyKasters save up to 50% in casting time over older, slower methods.



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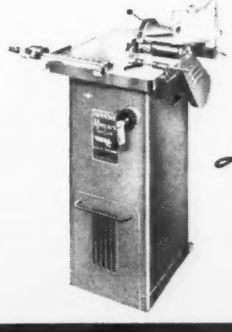
GLIDER
*TRIM*OSAW
WITH NO. 32
STRIP MATERIAL
CABINET



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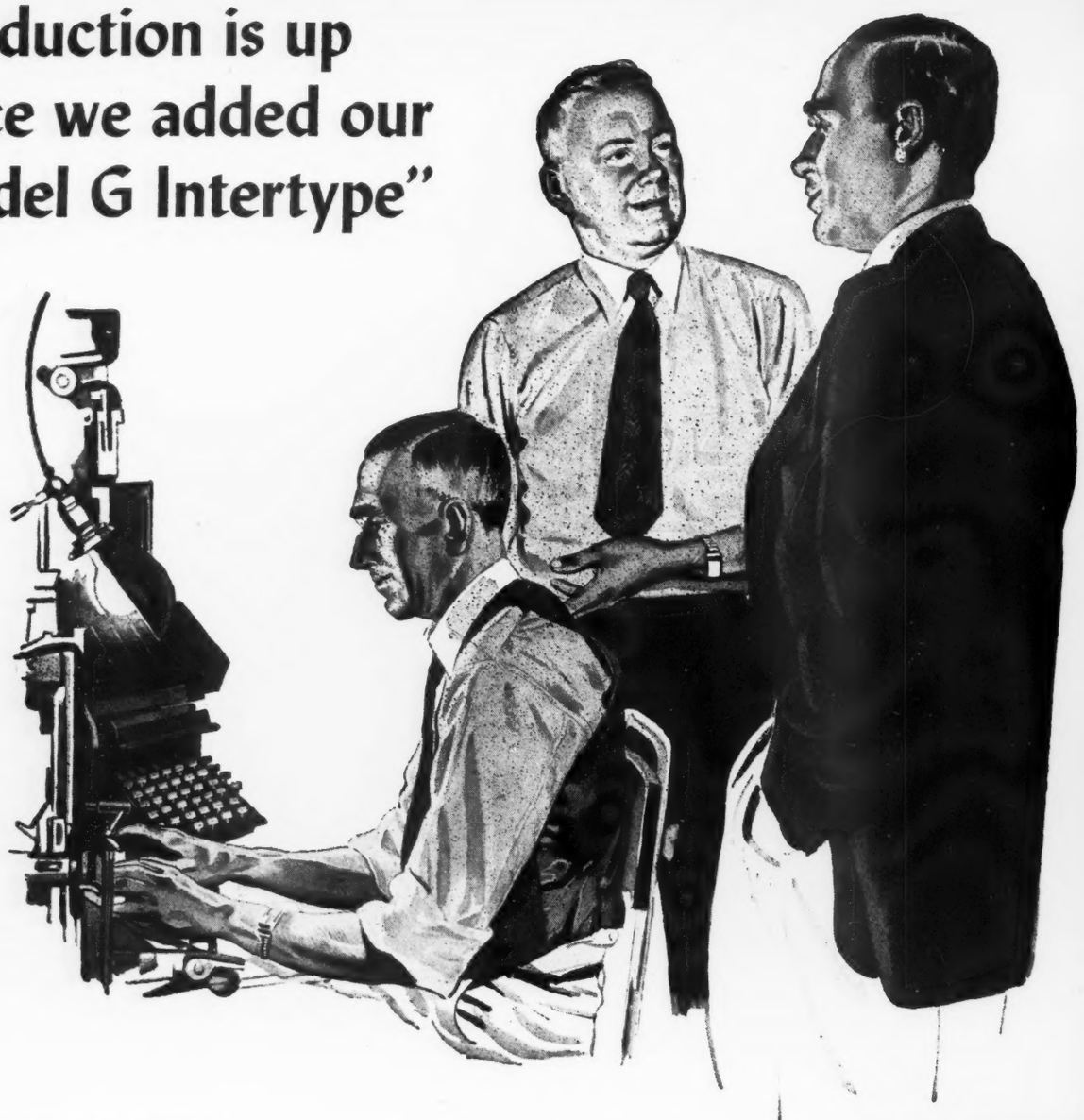
RADIAL ROUTER

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

"Production is up since we added our Model G Intertype"



Foreman: "The Model G Intertype turns out such a *variety* of work. Straight matter . . . heads . . . large display ads . . . all go through with equal ease. That means a lot in this shop. Really boosts production."

Operator: ". . . and my job is much easier. Intertype's continuous distribution, 'No-turn' Autoshift and Finger-Flip Shift for quick-and-easy mixing . . . the Six-Mold Disk with automatic ejector blade selection . . . and the Autospacer for automatic quadding and centering give me *more* time to concentrate on the *copy*."

Proofreader: "I'm in the best position to see the difference. With more proofs to read, fewer proofs go back for corrections . . . I've never seen such a variety of copy go through so smoothly."

Make-up Man: "You know what I appreciate? Less handling of individual type for large display ads. Clean, new slugs tailor-made for the job save my time and my temper when the pressure's on."

MODEL G MIXER . . . the "triple-service" Intertype . . . especially built for headsetting, display ads and even classified. It is a wide-range display machine and a fast straight-matter machine all in one. Equipped with 72 and 90-channel main magazines in any combination to meet your specific requirements.

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